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ANNOTATED BIBLIOGRAPHY OF ILLINOIS MINED LANDS: CHARACTERIZATION, UTILIZATION, RECLAMATION

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PREFACE

The following annotated bibliography represents a compilation of more than 250 reports-published and unpublished, theses, dissertations, symposia proceedings, data collections, and annual reports pertaining to the reclamation of Illinois mined lands. Special emphasis was placed upon identifying those resources associated with abandoned mined lands, characterization of their problems, and reclamation. To aid in the use of this annotated bibliography in locating pertinent literature, bibliographic citations were assigned, indexed by author, and cross-indexed under the following general subject categories: mine/refuse fires, open entrances, erosion, surface water impoundments, acid mine drainage, slides, watershed depletion, subsidence and slumping, metal pollution, highwalls, refuse dumps, mined land reclamation and utilization, inventories, and county, state, or regional location. Most of the documents in this bibliography are contained in the files of the Cooperative Wildlife Research Laboratory reference library for literature associated with the impact of mining and energy development. This reference library which was initiated more than 25 years ago now contains over 2,500 key references that are inclusive of state, national, and worldwide research interest. This library has provided both private and public representatives with ready access to many reports and publications not always available in other state or federal repositories.

In addition to this research library, the Laboratory also maintains the original data files of Illinois mined lands inventories. Although the surface mine inventory was completed in 1971 and the deep mine inventory in 1976, these inventories have provided the original data base for Illinois Department of Mines and Minerals, Division of Land Reclamation which can update these files through their permit process and regulatory program.

Additional mined land inventory resource materials including aerial photo mosaic indexes, enlargements, and negatives, as well as problem site watershed maps, and supplemental physical and chemical site data are also maintained by the Cooperative Wildlife Research Laboratory. These inventory materials have provided various state and federal agencies such as the Illinois Abandoned Mined Land Reclamation Council, Illinois Departments of Mines and Minerals, State Water and Geological Surveys, the SCS-Rural Abandoned Mine Program, Argonne National Laboratory, and the Federal Office of Surface Mining with baseline data and background information useful in implementing programs associated with the reclamation and research of Illinois lands affected by mining. It is hoped that our Laboratory's maintenance of the mined land inventories information and future supplements to this annotated bibliography will continue to enhance and complement ongoing efforts of those individuals and governmental agencies involved in reclamation research.

1

Abandoned Mined Lands Reclamation Council. 1978. Annual report '78 - abandoned mined lands reclamation council. Annual Report, Abandoned Mined Lands Reclamation Council (1978), 23 p.

INDEX UNDER: Mine-Refuse Fires/ Open Entrances/ Subsidence and Slumping/ Refuse Dumps/ Mine Land Reclamation & Utilization - general/ Macoupin, Montgomery, Grundy, St. Clair, Saline, Sangamon, LaSalle Counties

ABSTRACT: A review of Illinois mining reclamation laws including the Abandoned Mined Lands Reclamation Act (Public Act 78-1293) of 1975 are presented in this report. Abandoned Mine Lands Reclamation Council responsibilities and abandoned mine problems are outlined. Abandoned mined land reclamation projects at Staunton I, Nokomis Coalton, and Goose Lake in Macoupin, Montgomery and Grundy Counties, respectively, are discussed. Council response to emergency conditions including a refuse fire at the St. Ellen mine in O'Fallon, a gas leak from an improperly sealed mine entrance at the O'Gara Mine in Eldorado, subsidence at O'Fallon, and open air shafts at Berlin and Seneca are presented. A Program Review and Planning Document and a survey by the council staff and the Cooperative Wildlife Research Laboratory at Southern Illinois University-Carbondale are discussed.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1978 PERCENT COMPLETED: On going

ACCURACY OF DATA: On site inspection, published reports, interviews with professional persons.

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: General for program in Illinois, specific for several demonstration sites in state.

FORMAT OF DATA: Annual Report

2

Andros, S. D. 1915. Coal mining in Illinois. Ill. State Geol. Survey, Coal Mining Investigations Bull. 13. 250 p.

INDEX UNDER: Other - historical, coal reserves

ABSTRACT: This bulletin abstracts and summarizes district reports to compare mining practices in the state of Illinois as a whole. A historical chapter covers the economic development of the industry between 1673 and 1850. A bibliography of the geology, chemistry, and exploitation of different seams is included.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1673-1850 PERCENT COMPLETED: 100%

ACCURACY OF DATA: District Reports

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: General for State, some site specific.

FORMAT OF DATA: Published Bulletin

3

Anon. 1942. Spoil reclamation includes setting 7,000,000 trees in Illinois. Coal Age 47(8):66-67.

INDEX UNDER: Mine Land Reclamation & Utilization - forestation

ABSTRACT: This article reviews tree plantings on coal surface-mined lands in Illinois between 1930 and 1942. Total number of trees planted per county and by species on open-cut mined land is provided. Survival data is reviewed for select species.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1930-1942 PERCENT COMPLETED: 100%

ACCURACY OF DATA: Planting records.

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: General for Illinois; number of trees planted given by county.

FORMAT OF DATA: Published Report

4

Anon. 1961. Allendale: Stonefort's newest in northern Illinois. Coal Age 66(7):80-86.

INDEX UNDER: Other - surface-mine operation/ Stark County

ABSTRACT: An overview of the operation of Stonefort Mining Company's Allendale Mine, a surface mine in Stark County is provided.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1961 PERCENT COMPLETED: 100%

ACCURACY OF DATA: Company records

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: Specific for Allendale Mine in Stark County.

FORMAT OF DATA: Published article

5

Anon. 1963. Reclaiming land for profit. Coal Age 68(10):94-101.

INDEX UNDER: Mined Land Reclamation & Utilization - agriculture/ Indiana, Kentucky/ Perry, Jackson, Saline, Williamson, Fulton, McDonough, Schuyler, Vermilion Counties.

ABSTRACT: A history of the development of the Meadowlark Farms' operations on reclaimed surface-mined lands in Indiana, Kentucky, and Illinois is provided. In Illinois, Meadowlark Farms control operations in 8 counties. Reviews of each operation are provided in this report.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1945-1960 PERCENT COMPLETED: 100%

ACCURACY OF DATA: Company records

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: General for Meadowlark Farms in Illinois, Indiana, and Kentucky; operations in Illinois by county.

FORMAT OF DATA: Published Article

6

Anon. 1964. Acid mine-drainage: Control case histories. Coal Age 69(6):72-77.

INDEX UNDER: Acid Mine Drainage/ Refuse Dumps/ Pennsylvania, Kentucky, West Virginia

ABSTRACT: Case histories of acid mine drainage control or prevention are provided for sites in Pennsylvania, Illinois, Kentucky, and West Virginia. For two cases specific to Illinois proper disposal of refuse from preparation plants was utilized to prevent acid mine drainage. Refuse material was loaded into trucks and hauled back to the mine pit where it was graded level, compacted, and buried.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1964 PERCENT COMPLETED: 100%

ACCURACY OF DATA: On site inspection

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: Case histories for sites in Pennsylvania, Illinois, Kentucky and West Virginia.

FORMAT OF DATA: Published Article

7

Anon. 1964. Consol reclamation --- trees, farms, recreation areas. Coal Age 69(10):147-153.

INDEX UNDER: Mine Land Reclamation & Utilization - agriculture, recreation, forestation/ Ohio

ABSTRACT: This article provides a brief overview of Consolidation Coal Company's reclamation and land use program during 1951 to 1964. Consol's major reclamation programs are carried out in the Hanna and Truax-Traer divisions. A review of reclamation in Ohio (Hanna division) includes reforestation, seeding, research on grasses, raising cattle, flood control and recreation. In Illinois, leveling of spoils, experimental plot establishment to gain information on types of grass and vegetation which would grow on leveled spoils, row crop establishment, real estate development, and recreation are discussed.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1951-1964 PERCENT COMPLETED: N/A

ACCURACY OF DATA: Company records

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: General for Ohio and Illinois.

FORMAT OF DATA: Published Article

8

Anon. 1966. Ayrshire Meadowlark farms enter third decade showing profit. Mined-Land Conservation, 2(4):1-3.

INDEX UNDER: Mine Land Reclamation & Utilization - agriculture/ Indiana, Kentucky

ABSTRACT: This article provides a general account of the operation of the Ayrshire Meadowlark farms on surface mined lands from 1946 to 1966. Dissussion of farms in Indiana comprises most of the report but a list of all Illinois farms and their location, by county, is provided.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1946-1966 PERCENT COMPLETED: N/A

ACCURACY OF DATA: Company records

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: General for sites in Indiana, Kentucky and Illinois.

FORMAT OF DATA: Published Report

9

Anon. 1966. Strip coal mining --- the total-benefit industry. Coal Age 71(4):93-116.

INDEX UNDER: Mine Land Reclamation & Utilization - general/ Indiana, Colorado, Kentucky, Ohio, Tennessee

ABSTRACT: This article provides an overall view of reclamation and utilization of lands surface-mined for coal in the United States. Information on lands in Illinois, Indiana, Colorado, Kentucky, Ohio and Tennessee is included. Recreation, industry, agriculture, wildlife habitat, and other land uses are discussed.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1930's-1966 PERCENT COMPLETED: 100%

ACCURACY OF DATA: Source unknown

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: General for Indiana, Illinois, Colorado, Kentucky, Ohio, Tennessee.

FORMAT OF DATA: Published Article

10

Anon. 1966. Hunting, strip-mine style - a sportsman's bonanza. Mine-Land Conservation, 2(10):1-4.

INDEX UNDER: Mine Land Reclamation & Utilization - wildlife/ Perry County/ Ohio, Pennsylvania, Indiana, West Virginia, Kansas, Missouri

ABSTRACT: This report outlines hunting on surface-mined areas in Ohio, Pennsylvania, Indiana, West Virginia, Kansas, Missouri, and Illinois. In Illinois, duck hunting was the most productive hunting in northern and central parts of the state, but much of the prime waterfowl areas were not accessible for public utilization. Deer hunting was best in southern Illinois while bobwhite quail and cottontail rabbits were best in the south-central region, especially on the Pyatts area in Perry County.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1966 PERCENT COMPLETED: 100%

ACCURACY OF DATA: N/A

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: General for Ohio, Pennsylvania, Indiana, West Virginia, Kansas, Missouri and Illinois.

FORMAT OF DATA: Published Article

11

Anon. 1966. Buffalo find home on surface-mined range. Mined-Land Conservation 2(5):1-2.

INDEX UNDER: Mine Land Reclamation & Utilization - wildlife/ Fulton County

ABSTRACT: Buffalo have been transplanted to a 70-acre range on mined land at the Buckheart Mine of United Electric Coal Companies in Fulton County, Illinois.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1966 PERCENT COMPLETED: 100%

ACCURACY OF DATA: N/A

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: Specific for Buckheart Mine, Fulton County, Illinois.

FORMAT OF DATA: Published Article

12

Anon. 1966. Illinois program features varied uses of mined land. Mined-Land Conservation 2(3):1-3.

INDEX UNDER: Mine Land Reclamation & Utilization - recreation, forestry, agriculture/ Fulton County

ABSTRACT: A brief account of surface mining and subsequent reclamation of these lands in Illinois is provided by this article. Details of Fulton County mining and reclamation are presented. Reclamation for recreation, forestry, and agriculture are discussed.

SUPPLEMENTARY INFORMATION

TIME PERIOD: ?-1965 PERCENT COMPLETED: N/A

ACCURACY OF DATA: Source unknown

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: General for Illinois, some data specific for individual counties.

FORMAT OF DATA: Published Article

13

Anon. 1967. The good reclamation neighbors. Mined-Land Conservation, 3(8):1-4.

INDEX UNDER: Mine Land Reclamation & Utilization - forestation, orchards/ Perry County

ABSTRACT: This article provides a general overview of United Electric Coal Companies' land reclamation programs on lands surface mined for coal near DuQuoin. Reforestation and the production from orchards are discussed.

SUPPLEMENTARY INFORMATION

TIME PERIOD: N/A PERCENT COMPLETED: 100%

ACCURACY OF DATA: Source unknown

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: Site specific for DuQuoin, Illinois; general information.

FORMAT OF DATA: Published Article

14

Anon. 1968. Big beef business flourishes on reclaimed strip lands. Coal Age 73(1):71-75.

INDEX UNDER: Mine Land Reclamation and Utilization - ranching, recreation/ Fulton County

ABSTRACT: This article describes the operation of the Wier Ranch, a 5,000-acre ranch developed on surface-mined land near Canton, Illinois. Approximately 1,200 acres of the ranch have been reclaimed sufficiently to qualify as crop land; food crops, primarily alfalfa, are grown on these acres to support nearly 3,000 head of cattle. A 400-member fishing club was established to encourage recreational use of the 40 to 50 man-made lakes on the property.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1968 PERCENT COMPLETED: N/A

ACCURACY OF DATA: Source unknown

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: Specific for Wier Ranch near Canton, Illinois.

FORMAT OF DATA: Published Article

15

Anon. 1968. Giant geese find new home on mined land. Mined-Land Conservation 4(7):4.

INDEX UNDER: Mine Land Reclamation & Utilization - wildlife/ Fulton, Knox, Peoria Counties

ABSTRACT: This article provides an account of giant canada geese (Branta canadensis maxima) which were released on eight surface mined areas in Fulton, Knox and Peoria Counties.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1968 PERCENT COMPLETED: 100%

ACCURACY OF DATA: Illinois Department of Conservation Records

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: Site specific for areas in Fulton, Knox and Peoria Counties.

FORMAT OF DATA: Published Article

16

Anon. 1968. Unique animal fossil finds in Illinois strip bank. Mined-Land Conservation 4(9):1-4.

INDEX UNDER: Mine Land Reclamation & Utilization - general/ Will County

ABSTRACT: This article provides an account of fossil hunting at Peabody Coal Company's Pit 11 in northern Illinois. The "Tully Monster" Tullimonstrum gregarium, is one of 70 newly described species of fossil invertebrates discovered at the site. Mayomyzon pieckoensis, the oldest known fossil lamprey was also found at Pit 11.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1968 PERCENT COMPLETED: 100%

ACCURACY OF DATA: Personal communications with several authorities in the field.

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: Site specific for Peabody Coal Company's Pit 11 near Braidwood, Illinois.

FORMAT OF DATA: Published Article

17

Anon. 1969. Reclaimed land is for the birds -- and fish and beaver and deer and 'possums and frogs. Mined-Land Conservation 5(4):1-4.

INDEX UNDER: Mine Land Reclamation & Utilization - wildlife/ Virginia, Ohio

ABSTRACT: This article reviews wildlife utilization of surface-mined lands in Illinois, Virginia and Ohio. Several specific projects from Illinois are discussed.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1969 PERCENT COMPLETED: 100%

ACCURACY OF DATA: Source unknown

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: Specific for sites in Illinois, Virginia and Ohio.

FORMAT OF DATA: Published Article

18

Anon. 1969. Canadian geese transplanted in Illinois. Coal Mining and Processing 6(9):33.

INDEX UNDER: Mine Land Reclamation & Utilization - wildlife/ Fulton County

ABSTRACT: A cooperative venture begun in 1968 between the Illinois Department of Conservation and United Electric Coal Companies resulted in the release of 44 giant Canada geese on 3,000 acres of reclaimed strip-mined land near Canton, Illinois.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1968-1969 PERCENT COMPLETED: On going

ACCURACY OF DATA: Source unknown

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: Specific for United Electric Coal Companies' mine near Canton, Illinois.

FORMAT OF DATA: Published Article

19

Anon. ca 1969. Illinois coal study. Federal Systems Division of I.B.M. Corp. 299 p.

INDEX UNDER: Inventory data - coal resources/ Illinois, Indiana, western Kentucky / Other - coal utilization, economics

ABSTRACT: This paper presents the data collected during the second and third phases of the Illinois Coal Study, an independent study by the Federal Systems Division of I.B.M. Corporation. The second phase was a study of all resources of low sulfur coal in the mid-west coal basin. Data are presented by state, county, and coal seam for both strippable and deep reserves. Phase three was an assessment of the economic factors involved in limiting the use of high sulfur coal.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1969 PERCENT COMPLETED: 100%

ACCURACY OF DATA: Analysis of published data and unpublished state and federal files.

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: General and specific information for mid-western Coal Basin, information by county and coal seam.

FORMAT OF DATA: Published Report

20

Anon. 1970. Campgrounds on Mined land. Mined-Land Conservation, Special Supplement (Summer 1970). 4 p.

INDEX UNDER: Mine Land Reclamation & Utilization - recreation/ Indiana, Kansas, Kentucky, Missouri, Ohio, Pennsylvania

ABSTRACT: A general account of camping areas created on surface-mined land is provided for the states of Illinois, Indiana, Kansas, Kentucky, Missouri, Ohio and Pennsylvania. Five recreation areas or State Parks are listed for Illinois.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1970 PERCENT COMPLETED: 100%

ACCURACY OF DATA: From incomplete list of campsites on mined land.

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: Sites listed for Illinois, Indiana, Kansas, Kentucky, Missouri, Ohio, and Pennsylvania.

FORMAT OF DATA: Published Article

21

Anon. 1971. Reclamation - - - A Peabody Coal environmental specialty. Coal Age 76(10):124-129.

INDEX UNDER: Acid Mine Drainage/ Mine Land Reclamation & Utilization - general/ Alabama, Colorado, Oklahoma, Indiana, Kentucky, Missouri, Ohio.

ABSTRACT: An overview of Peabody Coal Company's reclamation program is provided in this article. General reclamation philosophy, staff, use concept, plant selection, methods of seeding and results of the reclamation program are discussed. Northern Illinois mines are utilized to explain the use concept in reclamation; uses include recreation, fossil hunting, farming, cattle raising and agronomic research. A water control plant at the Will Scarlet Mine in southern Illinois is also discussed.

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SUPPLEMENTARY INFORMATION

TIME PERIOD: 1951-1971 PERCENT COMPLETED: N/A

ACCURACY OF DATA: Company records

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: General information for Peabody Coal Company lands in Alabama, Colorado, Oklahoma, Indiana, Kentucky, Missouri, Ohio, and Illinois.

FORMAT OF DATA: Published Article

22

Anon. 1972. EPA strike force target: acid mine wastes. Illinois Environment, September. p. 1, 3.

INDEX UNDER: Acid Mine Drainage/ Metal Pollution/ Refuse Dumps

ABSTRACT: This article briefly describes the work of the Illinois EPA Acid Mine Waste Strike Force, the new Pollution Control Board regulations, and the program of county-by-county surveillance of possible problem sites with regard to acid runoff pollution.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1972-- PERCENT COMPLETED: On going

ACCURACY OF DATA: On site inspection, aerial surveillance

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: Information by county in Illinois.

FORMAT OF DATA: Published Article

23

Anon. 1972. The strip mine story. Illinois Wildlife 8(12):16.

INDEX UNDER: Mine Land Reclamation & Utilization - general

ABSTRACT: This article generally describes surface mining in Illinois including problem areas, total acreages involved, number of active operations, and regulations imposed by the 1962 and 1971 reclamation laws.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1962-1972 PERCENT COMPLETED: N/A

ACCURACY OF DATA: Source unknown

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: General for Illinois.

FORMAT OF DATA: Published Article

24

Anon. 1974. Chicago reclaiming strip mines with sludge. Civil Engineering 44:43-47.

INDEX UNDER: Mine Land Reclamation & Utilization - sewage sludge/ Fulton County

ABSTRACT: A discussion of the use of sewage sludge to reclaim surface mined lands in Fulton County is provided. Techniques utilized in transportation and application of sludge, early results, and problems associated with sewage sludge application and use are covered in this report.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1972-1974 PERCENT COMPLETED: On going

ACCURACY OF DATA: Source unknown

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: Specific for sites in Fulton County, Illinois.

FORMAT OF DATA: Published Article

25

Anon. 1975. Abandoned mines can be used for food production. Crops & Soils 28(3):22.

INDEX UNDER: Mine Land Reclamation & Utilization - agriculture

ABSTRACT: Leveling, adequate fertilization, a high rate of limestone and sewage sludge to neutralize soil, and erosion control are necessary for crop production on surface-mined soils.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1975 PERCENT COMPLETED: N/A

ACCURACY OF DATA: Interviews with agronomists

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: General for Illinois.

FORMAT OF DATA: Published Article

26

Anon. 1977. Researchers seek ways to grow corn after coal. Farm Journal 101(9):D-1.

INDEX UNDER: Mine Land Reclamation & Utilization - agriculture/ Iowa

ABSTRACT: A five year program to research potential of growing corn on surface-mined sites in western and southern Illinois will be conducted by soil scientists at the University of Illinois.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1977 PERCENT COMPLETED: On going

ACCURACY OF DATA: Interviews with soil scientist

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: General for Illinois.

FORMAT OF DATA: Published Article

27

Anon. 1978. Abandoned coal-mined land restoration to begin soon. "208" Update for Agriculture 2(7):1.

INDEX UNDER: Mine Land Reclamation & Utilization - general

ABSTRACT: A succinct presentation of plans to administer the Abandoned Mine Reclamation portion and the Rural Land Abandoned Mine Reclamation section of the Surface Mining Control and Reclamation Act of 1977 by the state of Illinois and the Soil Conservation Service, respectively, is provided in this article.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1978 PERCENT COMPLETED: N/A

ACCURACY OF DATA: Source unknown

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: General for Illinois.

FORMAT OF DATA: Published Article

28

Anon. 1979. Coal mining and agriculture. The Peabody Magazine, Special Issue (May 1979). 6 p.

INDEX UNDER: Mine Land Reclamation & Utilization - agriculture/ Knox County

ABSTRACT: A review of Peabody Coal Company's agricultural operations on restored surface mined land is provided. Production of legumes and row crop plants on graded and topsoiled areas, the costs of reclamation under the Surface Mining Control and Reclamation Act of 1977, and cattle production are discussed.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1974-1978 PERCENT COMPLETED: N/A

ACCURACY OF DATA: On site inspection, company records

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: Specific for Peabody Coal Company lands in Illinois.

FORMAT OF DATA: Magazine Article

29

Arata, A. A. 1957. Ecology and management of muskrats in strip-mine ponds in southern Illinois. M.S. Thesis, Southern Illinois University - Carbondale. 50 p.

INDEX UNDER: Mine Land Reclamation & Utilization - wildlife/ Perry County

ABSTRACT: The ecology of muskrats, *Ondatra zibethicus*, on surface-mined lands in Perry County was studied from 1954 to 1956. A description of the area and surrounding drainages and physical and chemical characteristics of the aquatic habitats are provided. Ecological studies included habitat characteristics, denning activities, population dynamics, parasites and predators, food habits and movements of the muskrat. Results of experimental plantings are presented. Recommendations for continued management are discussed.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1954-1956 PERCENT COMPLETED: 100%

ACCURACY OF DATA: On site observation

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: Specific for Pyatts Research Area, Perry County, Illinois.

FORMAT OF DATA: M.S. Thesis

30

Arata, A. A. 1957. Trapping the striplands. Ill. Wildl. 12(3):5-6.

INDEX UNDER: Mine Land Reclamation & Utilization - wildlife/ Perry County

ABSTRACT: This general article describes the potential of surface-mined land for the production of wildlife, particularly production of furbearers. Data collected during a study on ecology of muskrats from 1955 to 1957 on the Pyatts Research Area, Perry County, are summarized.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1955-1957 PERCENT COMPLETED: 100%

ACCURACY OF DATA: On site inspection

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: Specific for Pyatts Research Area, Perry County, Illinois.

FORMAT OF DATA: Published Article

31

Arata, A. A. 1959. Ecology of muskrats in strip-mine ponds in southern Illinois. J. Wildl. Manage. 23(2):177-186.

INDEX UNDER: Surface Water Impoundments/ Mine Land Reclamation & Utilization - wildlife/ Perry County

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[illegible]

ABSTRACT: A study of the ecology of the muskrat in surface-mine ponds in southern Illinois was part of a program to determine the wildlife potential of such small lakes. A total of 360 dens was recorded on approximately 142 acres of surface mine ponds. The density ranged from 0.3 to 9.0 dens per acre, averaging 2.8. This constituted 2.4 dens per 1000 feet of shore line. Males constituted 57 percent of the animals. Observations indicated that reproduction was low, with but two litters produced annually, averaging 3.4 kits.

Only two types of internal parasites were found, with low rates of incidence recorded, probably because of an absence of intermediate hosts. Field observations indicated that cattail, sweet clover, broomsedge, and goldenrod formed a substantial part of the summer diet, whereas the winter diet was composed largely of cattail rootstocks and willows. Stomach analysis indicated that stonewort and pondweeds also make up a large part of the winter diet. Both availability and preference are important in the selection of food items by muskrats.

Movement was greatest in February at spring dispersal, and in late summer when low water levels caused abandonment of dens.

Experimental plantings of arrowhead, water-lily, and bulrush were successful in the strip-mine ponds, although several other muskrat food plants did not become established because of the adverse ecological conditions.

Intensive management for muskrats on the strip lands studied was not recommended because of economic unfeasibility, but incidental management could be practiced secondarily to other management procedures. (modified author's summary)

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1954-1957 PERCENT COMPLETED: 100%

ACCURACY OF DATA: On site inspection; published literature

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: Specific for Pyatts Research Area, Perry County, Illinois.

FORMAT OF DATA: Published Article

32

Argonne National Laboratory. 1973. A data summary of existing pre-law surface mined area conditions. Argonne Natl. Lab., Argonne, Ill. (data-CWRL SIU-C) 35 p.

INDEX UNDER: Surface Water Impoundments/Acid Mine Drainage/Refuse Dumps/ Mine Land Reclamation and Utilization - forestation, revegetation/ Inventory Data - pre-law mined lands.

ABSTRACT: This publication provides an accounting of pre-law surface-mined lands and their current status. It provides county and statewide acreage totals with respect to several characteristics and conditions of the land, including the number of acres stripped, total mileage of hauling roads, fertility of the soil, present land use, and the acidity of soil and water. Data provided in this report were collected by the Cooperative Wildlife Research Laboratory at Southern Illinois University-Carbondale and cover only lands surface-mined prior to January 1, 1962 (pre-law). (from foreword)

SUPPLEMENTARY INFORMATION

TIME PERIOD: up to 1962 PERCENT COMPLETED: 100%

ACCURACY OF DATA: On site inspection, aerial photos, Department of Mines & Minerals data files.

QUANTITIES OF DATA: Data Summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: Specific data by county in Illinois.

FORMAT OF DATA: Published Report

33

Argonne National Laboratory. 1976. The Argonne land reclamation program. Argonne National Laboratory, Coal Extraction & Land Reclamation Program. 12 p.

INDEX UNDER: Acid Mine Drainage/ Refuse Dumps/ Mine Land Reclamation & Utilization - general/ Macoupin County

ABSTRACT: This brochure describes Argonne National Laboratory's Coal Extraction and Land Reclamation Program which will examine reclamation problems in the eight coal producing regions of the United States. In Illinois, Goose Lake Prairie State Park, Macoupin County Refuse site and a Midwestern Reclamation site are areas where research was being conducted. At an abandoned refuse area in Macoupin County water quality studies and soil-related research was being conducted.

SUPPLEMENTARY INFORMATION

TIME PERIOD: N/A PERCENT COMPLETED: N/A

ACCURACY OF DATA: N/A

QUANTITIES OF DATA: Program outline

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: General for United States, general information for specific sites in Illinois.

FORMAT OF DATA: Pamphlet

34

Argonne National Laboratory. 1977. National coal utilization assessment - a preliminary assessment of the health and environmental effects of coal utilization in the midwest. Regional Studies Program, Argonne National Laboratory, ANL/AA-6. Vol. 1. 247 p.

INDEX UNDER: Mine Land Reclamation & Utilization - general/ Other - health, coal utilization/ Indiana, Michigan, Minnesota, Ohio, Wisconsin

ABSTRACT: This report provides an initial assessment of the potential impact on health and environment from coal utilization in the states of Illinois, Indiana, Michigan, Minnesota, Ohio, and Wisconsin. Included in this volume are a characterization of energy demands, coal-related technologies and coal resources; and related impacts on human health and environmental quality. The report emphasizes impact of coal extraction, land reclamation, coal combustion for electrical generation and coal gasification. Impacts are projected for the time period from 1975 to 2020. (from abstract & summary)

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1975 projected to 2020 PERCENT COMPLETED: 100%

ACCURACY OF DATA: From published data

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy ($10.75 - N.T.I.S)

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: General for states in mid-western United States (Indiana, Illinois, Michigan, Minnesota, Ohio, and Wisconsin); some specific for Illinois.

FORMAT OF DATA: Published Report

35

Argonne National Laboratory. 1977. Staunton I site reclamation demonstration project. Argonne National Laboratory, Land Reclamation Program. 5 p., Map.

INDEX UNDER: Acid Mine Drainage/ Refuse Dumps/ Macoupin County/ Mine Land Reclamation & Utilization - general

ABSTRACT: This report reviews the Staunton I reclamation demonstration project. The phases that will be implemented in this evaluation of the reclamation of a deep mine coal refuse system are listed.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1975-projected 1982 PERCENT COMPLETED: On going

ACCURACY OF DATA: On site study and evaluation

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: Site specific for Staunton I in Illinois.

FORMAT OF DATA: Printed Report

36

Ashby, W. C. 1964. Vegetational development on a strip-mined area in southern Illinois. Trans. Ill. State Acad. Sci. 57(2):78-83.

INDEX UNDER: Mine Land Reclamation & Utilization - forestry, revegetation/ Perry County

ABSTRACT: This study examined the floristic composition and vegetative characteristics of a surface mine area planted to black locust and shortleaf pine in Perry County, Illinois. Ground cover was denser and taller in areas planted to black locust while ground cover was sparse over much of the pine plantation. A table listing flora found in the two plantations is presented showing woody plant invaders about half as numerous as the herbaceous invaders.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1938-1939 -- 1962-1963

PERCENT COMPLETED: 100%

ACCURACY OF DATA: On site inspection

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: Site specific for Fidelity Mine in Perry County, Illinois.

FORMAT OF DATA: Published Article

37

Ashby, W. C. 1978. How to succeed with trees. Botany Dept., Southern Illinois University - Carbondale. 4 p.

INDEX UNDER: Mine Land Reclamation & Utilization - forestation/ Kentucky, Indiana

ABSTRACT: This paper reports on some of the concepts affecting tree growth on surface-mined lands. Climatic factors limit utilization of some species while having little or no affect on more adaptive species. Prelaw mining techniques resulted in a suitable tree producing medium because of breaking up of tight subsoils or pans which could limit root penetration and mixing of fresh minerals from rock overburden with unconsolidated overburden. Grading and topsoil replacement have variable affects on tree survival and growth. New tree species may have to be found to plant on weathered, acidic, infertile, and heavy topsoils overlying graded spoil in some regions as southern Illinois. (from text)

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1940's-1977 PERCENT COMPLETED: 100%

ACCURACY OF DATA: On site inspection, planting records

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: General for Eastern Interior Coal Province (Illinois, western Kentucky and western Indiana).

FORMAT OF DATA: Mimeograph Paper

38

Ashby, W. C., W. C. Hood, and M. L. Guerke. 1979. Geochemical factors affecting plant growth in reclamation. Weeds, Trees, and Turf Magazine 18(4):28, 30, 34, 36, 38, 43, 61.

INDEX UNDER: Acid Mine Drainage/ Metal Pollution/ Illinois Related/ Mine Land Reclamation and Utilization - revegetation/ Other - overburden properties.

ABSTRACT: This article provides a general overview of the geochemical factors affecting plant growth on surface-mined lands. A discussion of overburden properties relative to ion release from unconsolidated and weathered material close to the surface and from consolidated sedimentary rocks and minerals is provided. Iron sulfide or pyrite is the dominant geochemically active mineral in overburden materials. Details of pyrite oxidation processes and the release of ions which may or may not directly affect plant growth on mined lands are discussed.

SUPPLEMENTARY INFORMATION

TIME PERIOD: N/A PERCENT COMPLETED: 100%

ACCURACY OF DATA: Published and unpublished reports

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: General for mid-western mined land, some specific for southern Illinois.

FORMAT OF DATA: Magazine Article

39

Ashby, W. C., and C. Kolar. 1976. A 30-year record of tree growth in strip mine plantings. Tree Planters' Notes 28(3 & 4): 18-21, 31.

INDEX UNDER: Mine Land Reclamation & Utilization - forestation/ Perry County

ABSTRACT: In 1947, nine species of hardwood trees were underplanted in black locust (*Robinia pseudoacacia*) and shortleaf pine (*Pinus echinata*) plantations at the Fidelity Mine of United Electric Coal Companies in Perry County. This report describes the growth and survival of the underplanted and volunteer tree species. A discussion of soil features and stand development is also provided.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1947-1976 PERCENT COMPLETED: 100%

ACCURACY OF DATA: On site inspection, published and unpublished records

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: Specific for Fidelity Mine of United Electric Coal Companies, Perry County, Illinois.

FORMAT OF DATA: Published Article

40

Ashby, W. C., and C. A. Kolar. 1979. Choice of rooting medium in surface mine land reclamation. Paper presented at Spring Meeting of American Council for Reclamation Research, 11,12 April 1979. Argonne National Laboratory/Land Reclamation Program. 4 p.

INDEX UNDER: Mine Land Reclamation & Utilization - agriculture, soils/ Saline County

ABSTRACT: This paper reviews research conducted by greenhouse pot studies on minespoils and topsoil replacement as rooting medium. Results of species performance on graded minespoils and topsoil replacement show no difference for several species but better performance after topsoil replacement for others.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1979 PERCENT COMPLETED: 100%

ACCURACY OF DATA: On site collection, greenhouse pot experiments

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: Site specific for mines in Saline County, Illinois.

FORMAT OF DATA: Typed Paper

41

Ashby, W. C., C. Kolar, M. L. Guerke, C. F. Pursell, and J. Ashby. 1978. Our reclamation future, the missing bet on trees. IIEQ Document No. 78/04. 99 p.

INDEX UNDER: Mine Land Reclamation & Utilization - forestry

ABSTRACT: This document provides a general overview of the history of surface mined land reclamation in Illinois. Emphasized are tree planting activities on both pre- and post-law mined lands. Species performance, planting recommendations and utilization of trees for nurse crops, orchards, Christmas trees, bee pastures and wildlife habitat are discussed. Effect of forestation on environmental quality, recreation, and educational opportunities and needs are reviewed. Economic factors associated with post-mining land utilization are considered. A brief review of Illinois reclamation legislation and a reclamation directory for industry, state, academic, and federal agencies associated with Illinois surface-mined land reclamation concludes the report.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1930-1978 PERCENT COMPLETED: 100%

ACCURACY OF DATA: On site inspections, published and unpublished records, interviews with experts in field.

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: General for Illinois.

FORMAT OF DATA: Published Article

42

Ashby, W. C., C. A. Kolar, and N. F. Rogers. 1978. Black walnut plantings on midwestern spoil banks. Proceedings 3rd Annual Meeting, Canadian Land Reclamation Association. p. 315-319.

INDEX UNDER: Mine Land Reclamation & Utilization - forestation/ Illinois, Oklahoma, Kansas, Missouri, and Indiana

ABSTRACT: Results of a survey of tree species approximately 30 years after planting on surface-mined land are reported. Data are provided for black walnut survival and growth performance when planted with and without black locust nurse crops on leveled and unleveled spoils. Data are presented for the five states included in the study.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1947-48 -- 1978 PERCENT COMPLETED: 100%

ACCURACY OF DATA: On site inspection

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: General for midwest; specific for Oklahoma, Kansas, Missouri, Illinois, and Indiana.

FORMAT OF DATA: Published Article

43

Barthauer, G. L. 1971. Pollution control of preparation plant wastes - a research and demonstration project. AIME Environmental Quality Conference, Washington, D.C. 11 p.

INDEX UNDER: Erosion/ Acid Mine Drainage/ Refuse Dumps/ Mine Land Reclamation & Utilization - general/ Perry County

ABSTRACT: This project was initiated in an effort to demonstrate effective and practical means of abating air and water pollution from coal preparation plant wastes (refuse piles and slurry lagoons). The study site at the New Kathleen Mine near DuQuoin, Illinois consisted of a 40-acre refuse pile and a 50-acre slurry lagoon. Progress reported included various methods of chemical stabilization and establishment of vegetative cover.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1968-1972 PERCENT COMPLETED: 50%

ACCURACY OF DATA: On site research

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: Site specific for New Kathleen Mine near DuQuoin, Illinois.

FORMAT OF DATA: Typed Presentation

44

Beebe, R. L. 1960. Utilization of trees by a beaver colony (Castor canadensis michiganensis Bailey) in a southern Illinois stripmined area. Unpublished M.S. Research Report, Southern Illinois University - Carbondale. 23 p.

INDEX UNDER: Mine Land Reclamation & Utilization - wildlife/ Surface Water Impoundments/ Perry County

ABSTRACT: Results of a 14 week survey of tree utilization by beaver on the Pyatts Research Area, Perry County, are presented in this report. Species of tree, size, amount utilized, waste, and distance from water were recorded for each cutting noted. Cottonwood (Populus deltoides) and willow (Salix spp.) were the most commonly used trees.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1960 PERCENT COMPLETED: 100%

ACCURACY OF DATA: On site investigation

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: Site specific for Pyatts Research Area, Perry County, Illinois.

FORMAT OF DATA: Unpublished M.S. Research Report

45

Bell, R. 1956. Aquatic and marginal vegetation of strip mine waters in southern Illinois. Trans. Ill. Acad. of Sci. 48:85-91.

INDEX UNDER: Surface Water Impoundments/ Mine Land Reclamation & Utilization - revegetation/ Perry, Jackson, Williamson Counties

ABSTRACT: A study of 52 surface mine ponds in southern Illinois is described in this paper. Vegetation was characterized as submerged, floating, emergent, moist soil or recession zone. Floristic composition of aquatic and marginal vegetation and the effects of physico-chemical characteristics of the ponds on distribution and abundance of the plants are outlined.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1956 PERCENT COMPLETED: 100%

ACCURACY OF DATA: On site inspection and evaluation

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: Site specific for ponds in Jackson, Williamson, and Perry Counties, Illinois.

FORMAT OF DATA: Published Article

46

Bennett, O. L., W. H. Armiger, and J. N. Jones, Jr. 1976. Revegetation and use of eastern surface mine spoils. IN Soil Conservation Society of America. Land Application of Waste Materials. p. 195-215.

INDEX UNDER: Mine Land Reclamation & Utilization - revegetation

ABSTRACT: This article provides a general overview of surface-mined land reclamation and potential use in the eastern United States. Characteristics of mine spoil material, soil amendments for revegetation and crop production, and plant species adaptation are discussed.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1976 PERCENT COMPLETED: 100%

ACCURACY OF DATA: Published data; state, federal and company records

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: General for eastern United States including Illinois.

FORMAT OF DATA: Published Article

47

Birkenholz, D. 1958. Notes on a wintering flock of long-eared owls. Trans. Ill. State Acad. Sci. 51(1-2):83-86.

INDEX UNDER: Mine Land Reclamation & Utilization - wildlife/ Perry County

ABSTRACT: A wintering flock of long-eared owls (Asio otus) was studied from December 1956 to April 1957 on the Pyatts Research Area, Perry County. Descriptions of roosting habitat and habits were included. Analysis of pellets collected at roosting sites revealed that small mammals constituted 98 percent of the identifiable diet.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1956-1957 PERCENT COMPLETED: 100%

ACCURACY OF DATA: On site observation

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: Site specific for Pyatts Research Area, Perry County, Illinois.

FORMAT OF DATA: Published Article

48

Birkenholz, D. E. 1958. Reclamation of a spoil-bank area for wildlife purposes. Unpublished M.A. Thesis, Southern Illinois University - Carbondale. 70 p.

INDEX UNDER: Mine Land Reclamation & Utilization - wildlife/
Perry County

ABSTRACT: This thesis described techniques utilized to reclaim surface-mined lands in Perry County for wildlife purposes. A description of the area covered the topography, soil fertility, and vegetative features. Development included various types and degree of spoil leveling; establishment of plants for food and cover; use of herbicides, burning and cutting to create openings; plantation management; and building of brush piles to serve as coverts. All-weather roads were established to aid accessibility to the area. Response of game populations to management and development was discussed. Utilization of the area was examined relative to hunting, fishing and trapping activities. Recommendations for site management, leveling and seeding, and public utilization conclude the paper.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1956-1958 PERCENT COMPLETED: 100%

ACCURACY OF DATA: On site inspection and research

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: Specific for Pyatts Research Area, Perry County, Illinois.

FORMAT OF DATA: Unpublished M.A. Thesis

49

Boesch, M. J. 1974. Reclaiming the strip mines at Palzo. Compost Science 15(1):24-25.

INDEX UNDER: Erosion/ Acid Mine Drainage/ Metal Pollution/ Mine Land Reclamation & Utilization - sewage sludge/ Williamson County

ABSTRACT: This article describes results of experimental application of sewage sludge on acid mine spoils at Palzo in southern Illinois. Results indicated growth of grass was directly correlated with rate of sludge application and that in the most heavily treated plots reductions of 50 to 90 percent in iron, aluminum and manganese were recorded. Reductions also occurred in zinc, copper, lead, and sulfate concentrations and acidity decreased by 60 percent. Continued research will include contouring and subsurface water monitoring.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1967-1973 PERCENT COMPLETED: On going

ACCURACY OF DATA: On site research

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: Site specific for Palzo area, Williamson County, Illinois.

FORMAT OF DATA: Published Article

50

Bottomley, J. A. 1944. History and development of strip mining in Illinois. Illinois Mining Institute, Proceedings 52:90-100.

INDEX UNDER: Other - historical

ABSTRACT: A detailed history of the development of surface mining and surface mining equipment in Illinois is presented. Stripping began in 1866 near Danville, Illinois, as a simple hand-digging operation and developed until in 1943 approximately 17 million tons, or 23 percent of the entire output of all Illinois mines, was produced from surface mines.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1866-1944 PERCENT COMPLETED: 100%

ACCURACY OF DATA: Source unknown

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: General for Illinois.

FORMAT OF DATA: Published article

51

Brewer, R. 1958. Breeding-bird populations of strip-mined land in Perry County, Illinois. Ecology 39(3):543-545.

INDEX UNDER: Mine Land Reclamation & Utilization - wildlife/ Perry County

ABSTRACT: A survey of breeding birds on surface-mined lands in Perry County, Illinois, revealed 44 species. A majority of the birds were considered as forest edge species. Response of individual species to successional changes in vegetation and local site conditions resulted in differences in bird populations on areas stripped in different years.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1954-1956 PERCENT COMPLETED: 100%

ACCURACY OF DATA: On site observation

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: Site specific for Pyatts Research Area, Perry County, Illinois.

FORMAT OF DATA: Published Article

52

Brewer, R., and E. D. Triner. 1956. Vegetational features of some strip-mined land in Perry County, Illinois. Ill. Acad. Sci. Trans. 48:73-84.

INDEX UNDER: Mine Land Reclamation & Utilization - revegetation/ Perry County

ABSTRACT: This paper summarized the vegetational features of surface-mined lands in Perry County, Illinois. A general description of the area, composition of the vegetation, changes in vegetation associated with age of spoil and relationship of vegetation to topography of the spoils and hydronium ion activity are provided. Data relevant to the above relationships are provided in tabular form. A comparison of the Perry County surface mined areas to other mined areas concluded the paper.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1954 PERCENT COMPLETED: 100%

ACCURACY OF DATA: On site inspection

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: Site specific for Pyatts Research Area, Perry County, Illinois.

FORMAT OF DATA: Published article

53

Bridwell, J. G. 1967. A study of the status of strip mine lands in St. Clair County. Unpublished M.A. Thesis, Southern Illinois University, Edwardsville. 132 p.

INDEX UNDER: Inventory Data/ Mine Land Reclamation & Utilization - general/ St. Clair County

ABSTRACT: This thesis provides a general review of surface mining in St. Clair County; included is a historical overview, extent of mining, and possible future of the surface mining industry in the county. A review of current status of spoils revealed active mining and agriculture, primarily grazing, as the principal users of mined land. Approximately 40 percent of the land was considered idle. Grazing and recreational development were the most practical uses for the mined land at the time of this study.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1966-1967 PERCENT COMPLETED: 100%

ACCURACY OF DATA: Examination of maps, on site inspection, interviews with experts in field

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: General information specific for St. Clair County, Illinois.

FORMAT OF DATA: Unpublished M.A. Thesis

54

Bristow, J. W. 1944. Land reclamation accomplishments of Illinois strip mining companies. Illinois Mining Institute, Proceeding 52:103-109.

INDEX UNDER: Mine Land Reclamation & Utilization - general/Other-historical

ABSTRACT: A general review of the reclamation practices of Illinois coal mining companies through 1944 is provided. Reclamation practices are discussed as related to typical appearance of surface-mined areas, cost of and economic feasibility of leveling spoils, effects of mining on agricultural acreage, and types of top soils on Illinois spoil piles. Results of rehabilitation experiments in areas of forestation, stock ranges, and recreation area development are included.

X

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1930's-1944 PERCENT COMPLETED: N/A

ACCURACY OF DATA: Source unknown

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: General for Illinois.

FORMAT OF DATA: Published Article

55

Bruce, R. R., and E. A. Thurn. 1955. The potentialities of revegetating and utilizing agronomic species on strip mined areas in Illinois. Ill. Agricultural Experiment Station and Ill. Coal Strippers Association. 7th & 8th Year Progress Report. 34 p.

INDEX UNDER: Mine Land Reclamation & Utilization - revegetation, agriculture/ Fulton County

ABSTRACT: This report outlines research conducted from 1953 to 1955 on the potentialities of revegetating and utilizing agronomic species on surface mined lands. Subject coverage of this report was confined to graded mined lands. Discussion of experiments designed to measure response of corn to various fertility and vegetative treatments is provided. Measurements of certain physical properties of soils were taken to determine effects of vegetative treatments and weathering on crop yields.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1953-1955 PERCENT COMPLETED: On going

ACCURACY OF DATA: On site investigation; laboratory analyses

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: General for western Illinois; some site specific for Ayrshire-Collier Mine (Fairview) and Truax-Traer Mine (Fiatt).

FORMAT OF DATA: Annual Report

56

Bulow, F. J. 1966. The suitability of strip-mine ponds for use in feeding-out channel catfish. Unpublished M.A. Thesis, Southern Illinois University-Carbondale. 46 p.

INDEX UNDER: Surface Water Impoundments/ Mine Land Reclamation & Utilization - fisheries/ Jackson County

ABSTRACT: This study demonstrated that surface-mine ponds could be utilized to produce channel catfish (*Ictalurus punctatus*) for commercial or recreational purposes. Value of the ponds for catfish production was evidenced by the large poundages supported (maximum of 3,194 pounds per acre) and by the high feeding rates tolerated by the ponds (50 to 60 pounds per acre per day of pelleted food). The large holding capacity may be a function of depth and initial infertility of the surface-mine ponds. (adapted from author's discussion)

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1963-1965 PERCENT COMPLETED: 100%

ACCURACY OF DATA: On site investigations

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: Specific for ponds near DeSoto, Jackson County, Illinois.

FORMAT OF DATA: M.A. Thesis

57

Carter, R. P., J. R. LaFevers, E. J. Croke, A. S. Kennedy, and S. D. Zellmer. 1974. Surface mined land in the midwest: a regional perspective for reclamation planning. Argonne National Laboratory, Eneryy and Environmental Systems Division. ANL/ES-43. Prepared for Bureau of Mines, U.S. Dept. Interior, Washington, D.C. 691 p.

INDEX UNDER: Mine Land Reclamation & Utilization - general/ Other-coal resources/ Illinois, Indiana, Kentucky, Missouri, Ohio

ABSTRACT: This comprehensive report discussed problems associated with coal extraction and surface mine reclamation in the midwestern coal region which includes the states of Indiana, Illinois, Missouri, Kentucky, Ohio, Iowa, Nebraska, Kansas, Oklahoma, Arkansas, and Michigan. Past and current production, technologies, practices, and regulations are considered. Detailed assessment of mining data, reclamation problems, practices, policies and regulations are provided for Illinois, Indiana, western Kentucky, Missouri, and Ohio. Much of the mining inventory data presented for Illinois was obtained from the Annual Report Series of the Illinois Department of Mines and Minerals; pre-law and current mining operations inventories by the Cooperative Wildlife Research Laboratory, Southern Illinois University - Carbondale; and from maps and reports of the Illinois State Geological Survey.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1880's-1973 PERCENT COMPLETED: 100%

ACCURACY OF DATA: Published and unpublished data; state and company records

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: General for mid-west coal region; specific for states; information on coal provided by state, regions, districts, seams, companies, counties.

FORMAT OF DATA: Published Report

58

Carter, R. P., R. E. Zimmerman, and A. S. Kennedy. 1973. Strip mine reclamation in Illinois. Argonne National Laboratory, Energy and Environmental Systems Division. Prepared for Illinois Institute for Environmental Quality. 244 p.

INDEX UNDER: Mine Land Reclamation & Utilization - general/ Acid Mine Drainage/ Refuse Dumps/ Grundy, Fulton, Williamson Counties

ABSTRACT: This is a report of a project to develop cost-effective alternative plans for reclamation of pre-law surface-mined areas in Illinois. Primary objectives were to develop demonstration projects to determine reclamation and technological feasibility; provide a base of practical experience including alternative reclamation methods; and to develop and utilize management and data-collection systems. Discussions of environmental problems, both national and Illinois-related, and available reclamation technology are presented in terms of cost-effectiveness. A summation of land use including a socioeconomic portrait of Illinois, detailed summary of tax structure on pre-law lands, and reclamation laws is provided in the appendix. An extensive examination of reclamation technology relative to spoil areas, site recontouring, revegetation, mine drainage, data collection and analysis, and mine refuse utilization is presented. Proposals for demonstration sites in Grundy, Fulton, and Williamson Counties are made. (from introduction, text and summary)

Contains analysis of tax returns

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1972 PERCENT COMPLETED: 100%

ACCURACY OF DATA: Published and unpublished data; records of various agencies; some data sources unknown.

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: General for Illinois; specific data given by county in Tables.

FORMAT OF DATA: Published Report

59

Carter, R. P., et al. 1978. Land reclamation program annual report, July 1976 - October 1977. Argonne National Laboratory, Land Reclamation Program. ANL/LRP-2. 163 p.

INDEX UNDER: Erosion/ Acid Mine Drainage/ Refuse Dumps/ Mine Land Reclamation & Utilization - revegetation, agriculture/ Macoupin, Grundy, Randolph Counties

ABSTRACT: This annual report describes reclamation research by the Argonne National Laboratory during 1976 and 1977. Brief discussions of program development and coordination, current reclamation research, problems associated with the coal producing regions of the United States, and technology transfer by grants to universities or consulting contracts with private companies are presented. Nine research demonstration sites have been established; three of these are in Illinois. General background information, approach to research, and accomplishments are provided for each demonstration site. Sites in Illinois include Goose Lake Prairie State Park in Grundy County, Macoupin County Refuse Reclamation Project, and Burning Star Mine # 3 in Randolph County. Research at Goose Lake Prairie State Park was just established and involves investigation of the groundwater system. At the Macoupin County Refuse Reclamation Project research has proceeded in four phases; (1) planning and design, (2) baseline monitoring, (3) site development, and (4) post-construction evaluation. Phases 1 and 2 were completed by September 1976, construction was completed by May 1977, and post-construction evaluation began in April 1977. Data on surface water quality before, during, and after construction and on plant cover development are presented in tabular form. Soil investigations and cost-effectiveness of reclamation at the site are discussed. Proposed research at the Burning Star Mine # 3 will evaluate treatment and management designs for effectiveness in improving crop yield, stand establishment, and soil development. Revegetation research involved pot studies on materials collected at Grundy and Macoupin County sites. Nitrogen fixation, productivity in legumes, trace-element uptake, and on site revegetation research are discussed for the Macoupin County site. Topsoil storage and segregation, assessment of reclamation technologies on recovery technologies and research dynamics of soil microbiota on orphaned spoils comprise research at sites outside of Illinois. Other information in this report includes discussions of data system development, land use and economic data, and supporting research by academic institutions. Appendices provide information on the Land Reclamation Program staff including a list of their publications.

SUPPLEMENTARY INFORMATION

TIME PEROID: 1976-1977 PERCENT COMPLETED: 100%

ACCURACY OF DATA: On site inspection; laboratory experimentation

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: Site specific for sites in Grundy, Macoupin, and Randolph Counties, Illinois; general for nine coal producing regions of the United States.

FORMAT OF DATA: Annual Report

60

Caspall, F. C. 1975. Soil development on surface mine spoils in western Illinois. Natl. Coal Assoc./Bitum. Coal Res., Inc., Third Symp. on Surface Mining and Reclamation 3(2):221-228.

INDEX UNDER: Mine Land Reclamation & Utilization - soil development

ABSTRACT: Soil redevelopment was studied by analyzing samples collected at one-half to two inch depth intervals from mine spoils approximately 30 years old. Organic matter, carbonate minerals, and pH were determined for all samples. With controlled erosion, pedologic development under a good cover of well managed grasses and legumes will produce a thin soil with an A horizon-like character in 20 to 30 years. (from text and conclusion)

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1974 PERCENT COMPLETED: On going

ACCURACY OF DATA: On site collection, laboratory analyses

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: Specific for western Illinois, information as figures.

FORMAT OF DATA: Published Abstract

61

Caspall, F. C. 1975. Soil profile redevelopment and "topsoil" replacement on surface mine spoils in western Illinois. Proceeding 2nd Inter-University Energy Conf., Constraints on Coal Utilization. p. 6-13.

INDEX UNDER: Mine Land Reclamation & Utilization - soil, rowcrop

ABSTRACT: This abstract provides data collected from surface mined lands in western Illinois on soil redevelopment. Data are provided by depth of sample and age of spoils for clay content, organic matter accumulation, and weathering. Recommendations for topsoil replacement on areas reclaimed for rowcrop production are discussed.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1975 PERCENT COMPLETED: 100%

ACCURACY OF DATA: On site collection, Laboratory analyses

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: Specific for sites in western Illinois.

FORMAT OF DATA: Published Article

62

Chapman, A. G. 1967. Effects of spoil grading on tree growth. Mining Congress J. 53(8):93-100.

INDEX UNDER: Erosion/ Mine Land Reclamation & Utilization - forestation/ Kansas, Missouri, Indiana, Kentucky, Oklahoma, Iowa/ Illinois - Saline County

ABSTRACT: This article reviews some of the basic information and principles associated with effects of graded clay-containing spoils on planted trees. Creation of a forest cover means planting young trees and to make it a success requires the planning skills of professional technicians. Quality of spoil as a planting site is first assessed on the basis of its physical and chemical characteristics for tree survival and growth. Species should be selected to suit the particular spoil type and should have comparable growth rates. Textural classes of the soil fraction must be considered for prediction of grading effects on spoil that could adversely affect planted trees. Highly significant adverse effects of complete grading of clayey spoils on both survival and growth of hardwoods and conifers have been experimentally demonstrated in Ohio, Illinois Missouri, and Kansas. (adapted from author's summary)

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1947-1967 PERCENT COMPLETED: 100%

ACCURACY OF DATA: Published data

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: General for Illinois, Kansas, Missouri, Indiana, Kentucky, Oklahoma, Iowa; specific for Saline County, Illinois.

FORMAT OF DATA: Published Article

63

Christy, P. L., W. E. Smith, and E. E. Filer. 1979. New land uses created by surface mining. American Mining Congress J. 65(5): 40-45.

INDEX UNDER: Mine Land Reclamation & Utilization - general

ABSTRACT: Discussion of provisions of the Open Cut Land Reclamation Act (1962), The Surface Mined Land Reclamation Act (1968), The Surface Mined Land Conservation and Reclamation Act (1971), and the 1975 amendment to the 1971 act for surface mined land reclamation is provided. Lands mined, reclaimed, and released from surety bond coverage from 1971 to 1977 are discussed. Land utilization before and after mining is presented for those acreages affected by regulations imposed by each of the acts between 1971 and 1977. A brief discussion of surface mining techniques and post-mining land uses conclude the paper.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1971-1977 PERCENT COMPLETED: 100%

ACCURACY OF DATA: Department of Mines & Minerals data files

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: General for Illinois, some information provided by region in Illinois.

FORMAT OF DATA: Published Article

64

Clapper, W. W., and M. L. Wilkey. 1978. Effects of reclamation on land values in Staunton, Illinois. IN Canadian Land Recl. Assoc. Proceeding 3rd Annual Meeting. p. 242-249.

INDEX UNDER: Acid Mine Drainage/ Refuse Dumps/ Mine Land Reclamation & Utilization - general/ Macoupin County

ABSTRACT: This paper reports upon a cooperative reclamation demonstration project on an abandoned mine site designated Staunton No. 1 and examines the land values of the site before and after reclamation work. Appraised market values of land affected by the mine refuse and surrounding property increased as much as 529.5 percent after reclamation of the refuse area.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1975-1978 PERCENT COMPLETED: 100%

ACCURACY OF DATA: On site investigation

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: Site specific for underground mine at Staunton, Illinois.

FORMAT OF DATA: Published Article

ILLINOIS MINED LAND OSM BIBLIOGRAPHY

65

Clark, F. B. 1967. Recommendations for minimum stocking standards of forest trees planted on surface-mined lands in Illinois. Criteria Discussion Group, Springfield, Ill. 5 p.

INDEX UNDER: Mine Land Reclamation & Utilization - forestation

ABSTRACT: This report contains recommendations for minimum stocking standards of forest trees on surface mined lands in Illinois. Recommendations on time for survival counts, sampling procedures, and stocking standards are at the end of the first growing season, planting row transects, and 500 trees per acre as a minimum, respectively.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1967 PERCENT COMPLETED: 100%

ACCURACY OF DATA: On site inspection

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: General for Illinois.

FORMAT OF DATA: Published Report

66

Coal Extraction and Utilization Research Center. 1978. The second midwest reclamation tour and review. Illinois, Kentucky, and Indiana. August 14-17, 1978. Coal Extraction and Utilization Research Center, Southern Illinois University, Carbondale. 82 p.

INDEX UNDER: Mine Land Reclamation & Utilization - general/ Illinois, Kentucky, Indiana/ Acid Mine Drainage/ Refuse Dumps

ABSTRACT: This report outlines a tour of areas reclaimed or being reclaimed from surface mining of coal. Maps showing route of the tour and location of all sites visited are included. For each site visited, an information sheet which includes name and location of mine, ownership, mining history, geologic conditions, hydrologic conditions, equipment utilized, and reclamation and land utilization is provided.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1978 PERCENT COMPLETED: 100%

ACCURACY OF DATA: On site visits, interviews with company personnel

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: Specific for sites in Illinois, Kentucky, and Indiana.

FORMAT OF DATA: Published Report

67

Cole, A. 1977. Air-injection of solids to be used against mine subsidence in Illinois. U.S. Dept. Interior, Bureau of Mines, News Release. 2 p.

INDEX UNDER: Subsidence and Slumping/ St. Clair, Madison County

ABSTRACT: This news release reports that backfilling abandoned coal mine workings with solids injected by air pressure will be tried for the first time in the United States in an attempt to halt subsidence of undermined land in the Belleville-Maryville area of southern Illinois. This is a brief summary of what will be done. Scheduled completion date is late 1979.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1977-1979 PERCENT COMPLETED: 75%

ACCURACY OF DATA: On site investigation

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: Site specific - Maryville in Madison County and Belleville in St. Clair County, Illinois.

FORMAT OF DATA: Published Report

68

Cooperative Wildlife Research Laboratory. 1965. Result of strip-mined land research, Southern Illinois University. Unpublished Mimeographed Paper, Coopr. Wildl. Res. Lab., Southern Illinois University - Carbondale. 3 p.

INDEX UNDER: Other - bibliography

ABSTRACT: This list contains citations of 30 research reports or publications produced by persons associated with the Cooperative Wildlife Research Laboratory during the period 1955 to 1965. Studies relating to physical and chemical aspects of spoil and water; reclamation and management of surface-mined lands for wildlife and recreation; and inventories of vegetation and wildlife on surface-mined areas are enumerated.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1955-1965 PERCENT COMPLETED: 100%

ACCURACY OF DATA: Cooperative Wildl. Res. Lab. files of published data

QUANTITIES OF DATA: 30 citations

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: N/A

FORMAT OF DATA: Mimeographed Paper

69

Cooperative Wildlife Research Laboratory. 1970-1971. Inventory and assessment of Illinois lands affected by surface mining for coal. Cooperative Wildlife Research Laboratory, Southern Illinois University-Carbondale.

INDEX UNDER: Erosion/Surface Water Impoundments/Acid Mine Drainage/Metal Pollution/Highwalls/Refuse Dumps/Mine Land Reclamation & Utilization - general/Inventory Data - spoilbank properties, mined land survey, mined land use, problem sites

ABSTRACT: An environmental inventory and assessment of pre- and post-law areas affected by surface mining for coal in Illinois was conducted during 1970 and 1971. As a consequence of this inventory an extensive data base of biographical, physical, vegetational, and chemical resource information was assembled for more than 170,000 acres in 40 Illinois counties. Using existing government and industry records, all known affected areas were located on aerial photographs. Each site was field-inspected and data recorded concerning various spoil and water parameters. In addition, samples of spoil, gob, and slurry materials were collected for later analysis.The pH for water areas greater than two acres was also recorded.

As a consequence of this inventory an extensive aerial photograph file of surface mined areas was established. Affected acreage, problem site components, ownership, and reclamation status was delineated on aerial photographs for each mine area. All field inventory data, as well as chemical analyses of spoil and refuse materials, was recorded on magnetic computer tapes for storage and facilitation of subsequent analyses and report preparation.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1970-1971 PERCENT COMPLETED: 100%

ACCURACY OF DATA: Site visitation; aerial photographs; maps; county, state, and company records.

QUANTITIES OF DATA: Individual site files for all surface-mined areas (~170,000 acres)
EST. COST & TIME FOR DATA REPRODUCTION: N/A

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: Site specific for individual sites in Illinois; biographical, vegetational, physical and chemical data for approximately 170,000 acres of surface-mined land.

FORMAT OF DATA: Field evaluation forms, magnetic computer tape

70

Cooperative Wildlife Research Laboratory. 1975-1976. Inventory and assessment of Illinois lands affected by underground mining for coal. Cooperative Wildlife Research Laboratory, Southern Illinois University-Carbondale.

INDEX UNDER: Mine-Refuse Fires/ Open Entrances/ Erosion/ Surface Water Impoundments/ Acid Mine Drainage/ Subsidence and Slumping/ Metal Pollution/ Refuse Dumps/ Mine Land Reclamation & Utilization - general/ Inventory Data - mined land surveys, problem sites

ABSTRACT: An environmental inventory and assessment of past and present sites of underground mining for coal in Illinois was conducted during 1975 and 1976. As a consequence of this inventory, an extensive data base of biographical, physical, vegetational, and chemical resource information was assembled. Reviews of historical documents and mining records provided information for more than 4,000 sites of past underground mining activity. Historical reviews and evaluations of each mine location provided site specific information for ownership, mine operator, seam(s) mined, depth to seam, type of mine, dates of operation, affected acreage, slope, and erosion condition; extent of burning refuse; refuse composition and site class, volume, past treatment, and present utilization of mine site; vegetation--dominant species, density, and distribution; hazardous tipple areas, potentially hazardous or unsealed mine entrances; potential for off-site drainage and condition of affected areas. More than 500 refuse samples (burned and unburned gob and slurry) collected during site inspections were subsequently analyzed for the following parameters: pH, conductivity, potential acidity, soluble iron, manganese, aluminum and sulfate. A total of 500 drainage samples were collected from various locations (above mine, below mine, general runoff, gob and slurry pools, mine openings, impoundments, and drainage effected terrestrial areas) and analyzed for the following parameters: pH, total iron, sulfate, manganese, aluminum, total acidity, and conductivity. In addition, aerial photographs of each site were obtained in order to calculate affected acreage and delineate perimeters of each problem site component. Ground level black-and-white photographs and color slides were also obtained for most problem sites. All field and laboratory data were transferred to magnetic computer tape for storage and facilitation of subsequent analyses and report preparation.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1975-1976 PERCENT COMPLETED: 100%

ACCURACY OF DATA: On site inspection; aerial photographs; maps; county, state, and company records.

QUANTITIES OF DATA: Information for 4,076 underground mines

EST. COST & TIME FOR DATA REPRODUCTION: N/A

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: Site specific information for 4,076 underground mines in Illinois.

FORMAT OF DATA: Field evaluation forms, aerial photographs, B & W photographs, color slides, location maps, watershed maps, laboratory analysis forms, magnetic computer tapes.

71

Cooperative Wildlife Research Laboratory. 1976. Publications, theses. and reports of strip mined land research. Unpublished List, Cooperative Wildlife Research Laboratory, Southern Illinois University - Carbondale, 4 p.

INDEX UNDER: Other - bibliography

ABSTRACT: This list contains 42 citations of research reports, theses, or publications completed by persons associated with the Cooperative Wildlife Research Laboratory during the period 1956 to 1976. Studies relating to the inventory and management of wildlife and wildlife habitats on surface-mined lands, chemical and physical aspects of spoil and water, survey of surface-mined lands for recreational use, inventory of all lands affected by surface mining in Illinois, and problem site delineation are enumerated.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1956-1976 PERCENT COMPLETED: 100%

ACCURACY OF DATA: Cooperative Wildlife Res. Lab. library files

QUANTITIES OF DATA: 42 citations

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: N/A

FORMAT OF DATA: Mimeographed List

72

Costley, R. J. 1936. An ecological survey of an artificially bared area and adjacent territory, with special reference to the higher vertebrates. M.S. Thesis, Univ. Ill., Urbana. 103 p.

INDEX UNDER: Mine Land Reclamation and Utilization - wildlife/ Vermilion County

ABSTRACT: Results of an ecological survey of a surface-mined area in Vermilion County, Illinois, are provided in this thesis. Enumeration of vertebrate species associated with various successional stages present on the surface-mined lands was completed.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1936 PERCENT COMPLETED: 100%

ACCURACY OF DATA: On site investigation, published materials

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: Site specific for lands near Danville, Vermilion County, Illinois.

FORMAT OF DATA: Unpublished M.S. Thesis

73

Crawford, Murphy, & Tilly, Inc. 1969. Macoupin County report on feasibility of mine waste pollution abatement. Crawford, Murphy, & Tilly, Inc. Consulting Engineers, Springfield, Ill., Report to Macoupin County, Ill. Board of Supervisors. 37 p.

INDEX UNDER: Mine-Refuse Fires/ Erosion/ Surface Water Impoundments/ Acid Mine Drainage/ Metal Pollution/ Refuse Dumps/ Macoupin County

ABSTRACT: This report indentifies the extent of pollution from abandoned mine-waste piles and reports the feasibility of control measures as they apply to the Cahokia Creek Watershed in Macoupin County, one of the heaviest mined areas in Illinois. A variety of techniques are listed which could be implemented by joint action of the County, gob pile owners, the State Sanitary Water Board, and the Federal Water Pollution Control Administration. A proposed pilot pollution abatement project for a mine site owned by the city of Staunton is described.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1965-1969 PERCENT COMPLETED: 100%

ACCURACY OF DATA: On site inspection

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: Specific for nine mine sites located in the Cahokia Basin of Macoupin County, Illinois.

FORMAT OF DATA: Typed Report

74

Croxton, W. C. 1928. Revegetation of Illinois coal stripped lands. Ecology 9(2):155-175.

INDEX UNDER: Mine Land Reclamation & Utilization - revegetation/ Vermilion County

ABSTRACT: This paper reviews factors which affect the revegetation of lands surface-mined for coal. Included is a discussion of production of bare areas during stripping operations, general overburden profiles, a general view of stripland vegetation, factors contributing to acidity and its relation to distribution of vegetation, soil moisture, and soil fertility data on nitrogen, phosphorus, potassium, sulphur and water soluble salts. Trends in succession on coal stripped lands and the retardation of vegetation on highly acid areas are discussed.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1900's-1928 PERCENT COMPLETED: 100%

ACCURACY OF DATA: On site inspection; Published records

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: Specific for Vermilion County; general for Illinois.

FORMAT OF DATA: Published Article

75

Dallaire, G., and N. Godfrey. 1972. Chicago reclaiming strip mines with sewage sludge. Civil Engineering 42(September):98-102.

INDEX UNDER: Mine Land Reclamation & Utilization - sludge/ Fulton County

ABSTRACT: This article reviews the program of surface mine land reclamation by application of sewage sludge being carried out by the Metropolitan Sanitary District of Greater Chicago. Analysis of costs for a site in Fulton County and future plans for the continued development of the program are discussed.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1971-1972 PERCENT COMPLETED: On going

ACCURACY OF DATA: Interview of staff members of the Metropolitan Sanitary District of Greater Chicago

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: Specific for Fulton County, Illinois.

FORMAT OF DATA: Published Article

76

Dancer, W. S., and I. J. Jansen. 1978. Clay-pan soils and the reclamation of surface-mined land in southern Illinois. Canadian Land Reclamation Association, Proceedings 3rd Annual Meeting. p. 140-154.

INDEX UNDER: Mine Land Reclamation & Utilization - soils, revegetation/ Perry County

ABSTRACT: Plant growth on major unconsolidated overburden materials was summarized in this article. Greenhouse pot studies indicated that perennial ryegrass (Lolium perenne L.) grew best on topsoil when fully amended but that greater productivity occurred on loess and glacial till when amended only with nitrogen. Red clover (Trifolium pratense L.) showed maximum growth on C-horizon (loess) as well as on top soil. These experiments demonstrate the inferior nature of clay pan subsoil or B-horizon soils common to southern Illinois. (from text and summary)

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1977-1978 PERCENT COMPLETED: 100%

ACCURACY OF DATA: On site collection; green house experimentation

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: Specific for Perry County, Illinois.

FORMAT OF DATA: Published Article

77

D'Antuono, J. R. 1979. Some aspects of natural vegetation establishment on abandoned underground coal mine refuse areas in Illinois. Illinois Inst. of Nat. Resources (IINR) Doc. 79/18. 84 p.

INDEX UNDER: Refuse Dumps/ Mine Land Reclamation & Utilization - revegetation

ABSTRACT: This study characterized chemical and physical parameters of 36 naturally well-vegetated disposal sites, related those parameters to the occurence of vegetation, and offered feasible alternatives to standard reclamation techniques. Chemical and physical parameters were evaluated for composit samples collected from three depths in well-vegetated areas and from the surface of adjacent barren portions of the site.

Size, coal seam mined, age of refuse, composition, slope, erosion condition, and texture were not considered prohibitive to vegetation establishment. Significant differences were found between the surface 6 inches of vegetated and adjacent barren portions of unburned gob for levels of pH, conductivity, acidity, aluminum, cation exchange capacity, and base saturation of potassium; and in concentrations of manganese, iron, zinc, and base saturation of aluminum. No significant differences were found between surface samples of burned gob and slurry. Significant differences were noted in concentrations of sulfur, iron, conductivity, and cation exchange capacity at different depths; and for levels of iron, potassium, magnesium, calcium, and base saturation of potassium, magnesium, calcium, and sodium among the three sample types. Concentrations of iron, phosphorus (strong Bray), potassium, copper, and base saturation of potassium and sodium were significantly different in the three sample types; and significant differences were found in pH, acidity, manganese, conductivity, potassium, cation exchange capacity, and base saturation of potassium for the vegetation status (vegetated/barren) of the refuse.

Reclamation alternatives for small sparsely vegetated deep mine disposal sites need to be developed. Based on net liming requirements, most areas examined would require a net lime rate of approximately 10 tons per acre. These areas would be a source of increased habitat diversity, and provide associated recreational value. (from author's abstract)

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1977 PERCENT COMPLETED: 100%

ACCURACY OF DATA: On site inspection and collection; laboratory analyses

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: General for Illinois; site specific information provided.

FORMAT OF DATA: Published Article; M.S. Research Report, SIU-C

78

Dappert, A. F. 1929. A study of the pollution of the Big Muddy River system. Trans. Ill. State Acad. Sci. 22:115-122.

INDEX UNDER: Acid Mine Drainage/ Watershed Depletion/ Franklin, Williamson, Jackson Counties

ABSTRACT: Results of a detailed study to determine the character, amount, and effect of pollution of the Big Muddy River system is provided in this report. Detailed investigations of the river system included accurate physical surveys of all sources of pollution in the watershed relative to the character, amount, and point of entrance; routine physical observation of effect of pollutants along all critical stretches of the tributary stream or river; and repeated chemical and biological sampling of stations established along the water courses. Acid mine drainage was one of the major pollution problems associated with the watershed.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1928 PERCENT COMPLETED: 100%

ACCURACY OF DATA: On site inspection

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: Specific for Big Muddy River Basin, Franklin, Williamson, and Jackson Counties, Illinois.

FORMAT OF DATA: Published Article

79

Davis, E. M. 1979. Mine subsidence: 'You hear a pop and wonder what's next' Southern Illinoisan, Sunday June 24 1979. Vol. 87(146):1.

INDEX UNDER: Subsidence and Slumping/ Williamson County

ABSTRACT: This newspaper article reviews the results of a mine subsidence incident at Energy, Illinois, during November 1978. Effects of the mine subsidence on a family and attempts to obtain State and Federal aid are discussed.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1978 PERCENT COMPLETED: 100%

ACCURACY OF DATA: Source unknown

QUANTITIES OF DATA: Case study

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: Specific for Energy, Illinois.

FORMAT OF DATA: Newspaper article

80

Deane, J. A. 1966. How strip mining improves mid-west water supplies. Coal Age 71(5):66-68.

INDEX UNDER: Erosion/ Surface Water Impoundments/ Mine Land Reclamation & Utilization - general/ Ohio, Indiana

ABSTRACT: This article points out the benefits of surface mining associated with better control and utilization of water flow. Water benefits, effect of grading on erosion and infiltration rates, role of vegetation in erosion control, and utility of lakes created by surface mining are discussed. Reclamation planning and development of lakes are reviewed.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1966 PERCENT COMPLETED: 100%

ACCURACY OF DATA: Published Materials

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: General for Indiana, Illinois and Ohio.

FORMAT OF DATA: Published Article

81

Deane, J. A. 1968. The abatement program of Peabody Coal Company. Symp. on Coal Mine Drainage Research 2:392-395.

INDEX UNDER: Acid Mine Drainage/ Refuse Dumps/ Erosion/ Mine Land Reclamation & Utilization - general/ Indiana

ABSTRACT: This article reviews the mined-land reclamation programs and associated problems of peabody Coal Company in the mid-west. Control of make-up water and runoff from preparation plant sites and refuse piles, discharges from active and inactive deep mines, and outflows from active, inactive, and abandoned open pit mines are a part of Peabody's clean stream program. Proper disposal of refuse or acid forming materials include coverage with earth or water. Reforestation of silt ponds, construction of a distribution system and filtration and chlorination plant for municipal use of impounded water, and the control of silt from surface mined areas are discussed.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1968 PERCENT COMPLETED: 100%

ACCURACY OF DATA: Company records

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: General statements covering mines in 8 states, including Illinois.

FORMAT OF DATA: Published Article

82

Deitschman, G. H. 1950. Seedling survival and height growth on graded and ungraded strip-mined land in southern Illinois. U.S.D.A., Forest Service, Central States For. Expt. Sta., Note No. 62. 2 p.

INDEX UNDER: Mine Land Reclamation & Utilization - forestation/ Saline County

ABSTRACT: This note reports the findings of an investigation of seedling survival and height growth on graded and non-graded spoils in Saline County, Illinois. Grading did not have an important influence upon survival but results indicated that a more rapid growth rate occurred on ungraded spoils.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1947-1950 PERCENT COMPLETED: 100%

ACCURACY OF DATA: On site inspection

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: Site specific in Saline County, Illinois.

FORMAT OF DATA: Published Note

83

Deitschman, G. H. 1950. Comparative survival and growth of trees planted under three types of overhead cover on strip-mined land in southern Illinois. U.S.D.A., Forest Service, Central States Forest Experiment Station, Notes No. 63. 2 p.

INDEX UNDER: Mine Land Reclamation & Utilization - forestation/ Perry, Randolph Counties

ABSTRACT: This note provides results which demonstrate the beneficial effects of cover on the early development of underplanted species of shade tolerant trees. Survival and height growth was greater under black locust than under shortleaf pine or more exposed areas. The value of black locust as a nurse crop may warrant including it in future hardwood plantings.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1947-1950 PERCENT COMPLETED: 100%

ACCURACY OF DATA: On site inspections

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: Specific for study sites in Perry and Randolph Counties, Illinois.

FORMAT OF DATA: Published Note

84

Dixon, H. M. 1951. The Illinois coal mining industry. Unpublished Ph.D. Thesis, University of Illinois, Champaign-Urbana. 277 p.

INDEX UNDER: Other - coal industry

ABSTRACT: An economic study of part of the Illinois coal mining industry is reported in this dissertation. Included are chapters on the development of the mining industry, Illinois coal operators, economic characteristics of the industry, analysis of economic development of the industry and implication for the future of Illinois coal.

SUPPLEMENTARY INFORMATION

TIME PERIOD: to 1950 PERCENT COMPLETED: 100%

ACCURACY OF DATA: Published reports; interviews with company personnel

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy - University microfilms

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: General for Illinois and to a lesser extent for the United States - information specific for Illinois counties.

FORMAT OF DATA: Ph.D. Thesis

85

Doerr, A. H. 1950. Williamson and Franklin Counties - coal counties of southern Illinois. J. Geography 49:193-200.

INDEX UNDER: Other - economics/ Franklin, Williamson Counties

ABSTRACT: This article provides an examination of the geography of Williamson and Franklin Counties in southern Illinois. The role played by coal and its production in these counties is reviewed.

SUPPLEMENTARY INFORMATION

TIME PERIOD: to 1950 PERCENT COMPLETED: 100%

ACCURACY OF DATA: Published articles and reports; unpublished reports; personal communications

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: General data restricted to Williamson and Franklin Counties, Illinois.

FORMAT OF DATA: Published Article

86

Downing, D. 1979. Section 17 Interim regulations for Illinois. Surface coal mining operations and application for permits for surface facilities and disturbances not subject to section 4 permits. Illinois Department of Mines and Minerals, Memorandum. 70 p.

INDEX UNDER: Other - mining regulations

ABSTRACT: Copies of Section 17 Interim Regulations for Illinois surface coal mining operations and application forms for permits to conduct surface mining operations are provided in this memorandum.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1979 PERCENT COMPLETED: 100%

ACCURACY OF DATA: Records of Dept. Mines & Minerals, Interim regulations

QUANTITIES OF DATA: Application format

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: General for Illinois.

FORMAT OF DATA: Memorandum

87

Doyle, J. C. 1976. The destruction of high capability agricultural land for strip-minable coal in Illinois. Environmental Policy Inst., Washington, D.C. 30 p.

INDEX UNDER: Mine Land Reclamation & Utilization - agriculture/
Other - mining regulations

ABSTRACT: This report contains a discussion of coal mining and the destruction of agricultural land in Illinois. Information on coal resources, mining operations, and agricultural values is presented. Comments on the Illinois Surface Mined Land Conservation Act and Rule 1104, and on Section 522 of the Federal Surface Mine Bill are provided.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1976 PERCENT COMPLETED: 100%

ACCURACY OF DATA: Published records

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: General for Illinois; Tables and maps supply specific county information.

FORMAT OF DATA: Published Report

88

Edwards, J. H. 1947. Unleveled spoil bring good return as farming project. Coal age 52(2):92-97.

INDEX UNDER: Mine Land Reclamation & Utilization - agriculture, ranching/ Fulton County

ABSTRACT: Surface mining operations and reclamation for farming, primarily cattle production, at the Red Ember Mine in Fulton County, Illinois are reviewed in this article. Reclamation for grazing operations benefit wildlife on the surface-mined areas.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1946-1947 PERCENT COMPLETED: 100%

ACCURACY OF DATA: Company records

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: General information on farming of mined land in Fulton County, Illinois.

FORMAT OF DATA: Published Article

89

Energy & Environmental Analysis, Inc. 1978. Summary report of the mine waste control program for the southern Illinois 208 program. Energy & Environmental Analysis, Inc., for the Greater Egypt Reg. Planning & Dev. Comm., Carbondale, IL. 78 p.

INDEX UNDER: Inventory Data - water quality/ Acid Mine Drainage/ Watershed Depletion/ Metal Pollution/ Refuse Dumps/ Franklin, Gallatin, Jackson, Jefferson, Hamilton, Hardin, Perry, Pope, Saline, and Williamson Counties

ABSTRACT: A summary of a two year effort aimed at assessing the acid mine drainage impacted area within southern Illinois is provided in this report. Franklin, Gallatin, Jackson, Jefferson, Hamilton, Hardin, Perry, Pope, Saline and Williamson Counties were included in the study area. The study focused on developing a methodology and plan for national assessment and reasonable application of control technology for controlling mine waste throughout the area. Segments of the report provide a discussion of coal relative to the energy crisis and water quality issues; program overview, water quality sampling program, inventorying of baseline data, and an acid mine drainage simulation model; analysis of water quality baseline conditions for present and projected future mining development; and a recommended control program for abating acid mine waste pollution in the Big Muddy and Saline River Basins which includes a cost estimation model and a discussion of reclamation revenues from surface mine legislation revisions. (from introduction and text)

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1976-1978 PERCENT COMPLETED: 100%

ACCURACY OF DATA: On site inspections; mine survey of CWRL; Ill. Dept. Mines & Minerals aerial photographs and data files; Ill. EPA Strike Force

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: Specific for watersheds in Franklin, Gallatin, Jackson, Jefferson, Hamilton, Hardin, Perry, Pope, Saline, and Williamson Counties, Illinois.

FORMAT OF DATA: Published Report

90

Energy and Environmental Analysis, Inc. 1978. Water quality management planning. Volume II - Technical report for the : southern Illinois 208 mine waste control program. Energy and Environmental Analysis, Inc.; for Greater Egypt Regional Planning and Development Commission, Carbondale, IL. 507 p.

INDEX UNDER: Acid Mine Drainage/ Watershed Depletion/ Metal Pollution/ Inventory Data - water quality/ Franklin, Gallatin, Hamilton, Hardin, Jackson, Jefferson, Perry, Pope, Saline, and Williamson Counties

ABSTRACT: The technical details of a two year effort aimed at assessing the acid mine drainage impacted area within southern Illinois are provided in this report. The intent of this report was to provide a complete and open file on all activities for all agencies interested in the findings. The southern Illinois 208 study area included the Big Muddy and Saline Basins in Franklin, Gallatin, Jackson, Jefferson, Hamilton, Hardin, Perry, Pope, Saline, and Williamson Counties. Primary emphasis of the study was to develop a methodology and plan for rational assessment and reasonable application of the technology for controlling mine wastes within the area. Procedures, assumptions and data are extensively detailed in this report. An appendix provides the computer model and a user manual. The baseline data utilized in this study was obtained from mined land inventories conducted by the Cooperative Wildlife Research Laboratory at Southern Illinois University, Carbondale; from aerial photographs and data files of the Illinois Department of Mines and Minerals; Illinois Environmental Protection Agency 'Strike Force'; and on site water quality data collection. (from introduction and text)

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1976-1978 PERCENT COMPLETED: 100%

ACCURACY OF DATA: CWRL mine land inventories; Ill. Dept. Mines & Minerals aerial photos and data files; Ill. EPA Strike Force

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: Specific for watersheds in Franklin, Gallatin, Hamilton, Hardin, Jackson, Jefferson, Perry, Pope, Saline and Williamson Counties, Illinois.

FORMAT OF DATA: Published report

91

Evans, R. J., and J. R. Bitler. 1975. Coal surface mining reclamation costs - Appalachian and midwestern coal supply district. U.S. Dept. Int., Bureau of Mines Information Circular 8695. 50 p.

INDEX UNDER: Mine Land Reclamation & Utilization - general

ABSTRACT: This circular provides the results of a study conducted by the U.S. Bureau of Mines to determine as accurately as possible the actual costs involved in reclamation of coal surface mined land when completed in conjunction with active mining operations. Data presented reflect costs at undisclosed mines in each of three surface mining regions.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1975 PERCENT COMPLETED: 100%

ACCURACY OF DATA: On site observations; interviews with company personnel; author's cost estimating procedure

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: Information site specific for undisclosed mines in three coal producing regions.

FORMAT OF DATA: Published circular

92

Fehrenbacher, J. B., I. J. Jansen, and S. R. Aldrich. 1977. Reclaiming surface-mined soil: completed and proposed studies. Illinois Research 19(2):8-9.

INDEX UNDER: Mine Land Reclamation & Utilization - agriculture, forestation, sludge

ABSTRACT: This paper outlines research conducted by the Illinois Agricultural Experiment Station from 1945 to 1977 and presents proposed future research plans. Past studies have dealt with forestation, forage, grain and row crops, addition of organic matter such as Leonardite and sewage sludge, survival of pathogens in sludge, and economic studies. Future studies will examine changes in amount and condition of cropland, factors affecting crop rooting and stands, segregation and replacement of darkened surface soil and root medium, rate of soil development, how moisture content at various stages of handling spoils affects moisture regime in reclaimed land, and use of runoff for irrigation.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1945-1977 PERCENT COMPLETED: On going

ACCURACY OF DATA: Records of Ill. Agr. Exp. Station

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: General for Illinois.

FORMAT OF DATA: Published Report

ILLINOIS MINED LAND OSM BIBLIOGRAPHY

93

Fehrenbacher, J. B., I. J. Jansen, B. W. Ray, J. D. Alexander, and T. S. Harris. 1977. Soil associations of Knox County, Illinois. Univ. Ill., Urbana. College Agr. Spec. Publication 46. 27 p. +map.

INDEX UNDER: Mine Land Reclamation & Utilization - soils/ Knox County

ABSTRACT: This publication provides information on soil associations in Knox County. A small segment of the report is concerned with surface-mined land. Areas mined in the county are outlined and current and potential uses of these lands and their associated soils are discussed.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1977 PERCENT COMPLETED: 100%

ACCURACY OF DATA: Source unknown

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: Specific for Knox County, Illinois; information on maps.

FORMAT OF DATA: Published Article

94

Fisher, A. B. 1978. Coal mine water pollution legal and regulatory issues: a survey. Illinois Institute of Natural Resources (IINR). Document No. 78/33. 43 p.

INDEX UNDER: Acid Mine Drainage/ Metal Pollution/ Other - mining regulations/ Colorado, Indiana, Kentucky, Ohio, Pennsylvania, West Virginia, Wyoming

ABSTRACT: In order to complete assigned goals the Illinois Mine Related Pollution Task Force conducted a survey of rules and regulations governing mine related water pollution in several bituminous coal producing states. This report summarized results obtained from that survey. Comparison of water quality standards in the states surveyed with those of Illinois are provided in tabular format.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1978 PERCENT COMPLETED: 100%

ACCURACY OF DATA: Interviews with state officials of appropriate regulatory agencies

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: Data specific for Colorado, Indiana, Kentucky, Ohio, Pennsylvania, West Virginia, Wyoming and Illinois.

FORMAT OF DATA: Published Report

95

Gapen, D. 1977. Strip pit - lakes of the future? The Peabody Magazine. March 1977. p. 2-5. (Reprinted from American Bass Fisherman).

INDEX UNDER: Surface Water Impoundments/ Mine Land Reclamation and Utilization - recreation/ Peoria County

ABSTRACT: This article describes fishing in surface-mine lakes on Peabody Coal Company Land south of Peoria, Illinois. Largemouth bass and green sunfish were the major game species taken.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1977 PERCENT COMPLETED: 100%

ACCURACY OF DATA: On site fishing

QUANTITIES OF DATA: N/A

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: Specific for Peabody Coal Company land south of Peoria, Illinois.

FORMAT OF DATA: Published Article

96

Gibb, J. P., and R. L. Evans. 1978. Reconnaissance study of final cut impoundments. Illinois Institute for Environmental Quality. Document No. 78/25. 101 p.

INDEX UNDER: Surface Water Impoundments/ Knox, Fulton, Perry, Randolph, St. Clair, Will, Kankakee, Grundy Counties

ABSTRACT: This document provides data collected during a reconnaissance study of 12 final cut impoundments. Based on published water quality standards only 2 of the 12 lakes were suitable for public water supply, 3 were suitable for irrigation, but all 12 were suitable for livestock watering. Data provided in tablular form include physical and chemical features of all lakes. Recommendations for potential use and further research are provided.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1977-1978 PERCENT COMPLETED: 100%

ACCURACY OF DATA: On site inspection, Laboratory analyses, maps, published reports

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: General for Illinois; specific for lakes in Knox, Fulton, Perry, Randolph, St. Clair, Will, Kankakee, and Grundy Counties.

FORMAT OF DATA: Published Article

97

Gluskoter, H. J. 1965. Composition of ground water associated with coal in Illinois and Indiana. Economic Geology 60:614-620.

INDEX UNDER: Acid Mine Drainage/ Indiana

ABSTRACT: A total of 26 samples of uncontaminated ground water was collected in underground coal mines in Illinois and Indiana and analyzed for total dissolved minerals. The mineral constitutents in the ground water samples were predominantly alkalies and chloride. The acidity of mine water has its origin not in the ground water but in contamination after it enters the mine.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1963-1964 PERCENT COMPLETED: 100%

ACCURACY OF DATA: On site sampling and data collection

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: Specific for selected number of deep mine sites by county in Illinois and Indiana.

FORMAT OF DATA: Published Report

98

Good, D. M., V. T. Ricca, and K. S. Shumate. 1970. The relationship of refuse pile hydrology to acid production. Symp. on Coal Mine Drainage Research 3:145-152.

INDEX UNDER: Acid Mine Drainage/ Erosion/ Refuse Dumps/ Perry County

ABSTRACT: A summary of hydrologic data collection and acid formation associated with a refuse pile at the New Kathleen Mine, an abandoned deep mine near DuQuoin, Illinois is presented in this report. The refuse pile was reactive only in the outer few inches where exposed to atmospheric conditions. Rate of acid formation as $CaCO_3$ was 185 pounds acidity/acre-day. The reactive mantle was constantly renewed by erosion of surface materials.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1968-1970 PERCENT COMPLETED: On going

ACCURACY OF DATA: On site experimentation

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: Site specific for New Kathleen Mine at DuQuoin, Illinois.

FORMAT OF DATA: Published Article

99

Grandt, A. F. 1951. The potentialities of revegetating and utilizing agronomic species on strip mined areas. Ill. Agricultural Experiment Station and Ill. Coal Strippers Association. 4th Year Progress Report. 58 p.

INDEX UNDER: Mine Land Reclamation & Utilization - agriculture, pasture

ABSTRACT: Details of soil investigations including chemical analysis; effects of grading and microbiological studies; forage crop species adaptation studies; determination of forage yields and quality; economic interpretations; and a farm organization and operational plan for land-use of typical surface-mine areas put into operation in 1950 are all provided in this report. Future plans for continued investigations on surface-mined lands are discussed.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1951 PERCENT COMPLETED: On going

ACCURACY OF DATA: On site inspection and collection; Laboratory analyses

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: Experimental plots established over surface mined areas of Illinois; site specific information in Tables.

FORMAT OF DATA: Progress Report

100

Grandt, A. F. 1965. Reclamation for pasture and agricultural crops. Proc. Coal Mine Spoil Reclamation Symp., Penn. State Univ., University Park, PA; Oct. 11-14. p. 124-128.

INDEX UNDER: Mine Land Reclamation & Utilization - agriculture, pasture

ABSTRACT: A summation of several years research on agronomic species for use on surface-mined lands in Illinois is provided in this report. Topics covered include: physical and chemical characteristics of soil material on surface mined lands, establishment of agronomic species, quality of adapted species and the economic importance of reclamation for pasture. Corn, wheat, and various other crops can be grown successfully in specific areas of surface mined land in Illinois. Illinois mined-lands are readily adapted to pasture and hay production.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1950's--1960's PERCENT COMPLETED: 100%

ACCURACY OF DATA: Research records; published data

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: General for Illinois.

FORMAT OF DATA: Published Article

101

Grandt, A. F. 1971. Agriculture crops on mined lands. State Geo. Sur. Kansas Spec. Distr. Publ. 58. p. 21-25.

INDEX UNDER: Mine Land Reclamation & Utilization - agriculture, pasture

ABSTRACT: A general discussion of research on the use of agronomic species for reclamation of surface-mined lands in Illinois is provided in this report. Forage species, legumes and grasses, are the crops most commonly adapted to mined-land soils. Grain crops are used in limited areas. A listing of agricultural crops ranked by adaptability to type of mined-land soils, and classified by acidity and texture, is included.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1960's--1970 PERCENT COMPLETED: 100%

ACCURACY OF DATA: Results of several years research by author

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: General for Illinois.

FORMAT OF DATA: Published Article

102

Grandt, A. F. 1976. Reclamation policies and techniques. IN Illinois Coal; Proceeding of the 4th Annual Ill. Energy Conf. p. 130-141.

INDEX UNDER: Acid Mine Drainage/ Mine Land Reclamation & Utilization - agriculture, forestation, recreation

ABSTRACT: An overview of reclamation techniques and policies are presented in this paper. Effects of legislation on reclamation, history of reclamation, and reclamation and land uses are briefly discussed. Soil and overburden properties including chemical, physical, and biological factors, and topsoiling are covered. Uses of surface-mined lands discussed in this article include: pasture or range, forage and cropland, timber or forest land, water supplies, and recreational uses as fishing, wildlife, waterfowl, and fossil collecting. Acid mine drainage is briefly discussed.

SUPPLEMENTARY INFORMATION

TIME PERIOD: to 1975 PERCENT COMPLETED: 100%

ACCURACY OF DATA: from published records

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: General for Illinois and other areas of the United States.

FORMAT OF DATA: Published Article

103

Grandt, A. F. 1977. Reclaiming mined lands for row crop production in Randolph County, Illinois. Sen. Percy's Conference on Coal, Southern Illinois University, 10 Dec. 1977. 4 p.

INDEX UNDER: Mine Land Reclamation & Utilization - agriculture, row crop/ Randolph County/ Other - regulations

ABSTRACT: A brief explanation of requirements imposed by the 1971 Illinois Surface-Mined Land Conservation and Reclamation Act, P.A. 77-1568, as amended in 1975, P.A. 78-1295, for land suitable for row crop production the first year after mining on lands reclaimed is provided. It was recommended that for best management purposes, a legume-grass mixture be planted on such lands the first year to allow the land to settle and the chemical, physical, and biological aspects of the soil to stabilize.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1977 PERCENT COMPLETED: 100%

ACCURACY OF DATA: Company records

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: Specific for Randolph County, Illinois.

FORMAT OF DATA: Typed copy of presentation

104

Grandt, A. F. 1978. Reclaiming mined land in Illinois for row crop production. J. Soil & Water Conservation 33(5):242-244.

INDEX UNDER: Mine Land Reclamation & Utilization - agriculture, row crop/ Illinois - St. Clair, Randolph, Knox Counties

ABSTRACT: A review of research concerning agricultural crop production on surface-mined lands in Illinois is provided. A brief summation of reclamation requirements for row crop production as specified by the 1971 Illinois Surface-Mined Land Conservation and Reclamation Act as amended in 1975 is presented. Results of research conducted by the University of Illinois and Peabody Coal Company in St. Clair County showed yields on non-topsoiled surface-mined lands equaling or exceeding county averages. A 1974 topsoiling study by Peabody Coal Company in Knox County showed vast improvements in yields over graded spoil without topsoil application. Investigators recommended, after evaluation of research conducted in Randolph County on corn and soybean production, that a legume-grass mixture be grown during the first year after mining to allow proper setting and chemical, physical, and biological stabilization of the soil.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1948-1977 PERCENT COMPLETED: On going

ACCURACY OF DATA: Published records, company records, on site inspection

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: General for Illinois; specific for St. Clair, Knox, and Randolph Counties, Illinois.

FORMAT OF DATA: Published Article

105

Grandt, A. F., and A. L. Lang. 1958. Reclaiming Illinois strip coal land with legumes and grasses. University of Illinois Agricultural Experiment Station Bulletin 628. 64 p.

INDEX UNDER: Mine Land Reclamation & Utilization - agriculture, pasture

ABSTRACT: Formal research on the reclamation of surface-mined lands in Illinois was begun in 1946. Characteristics of the soil material, species adaptation, and the utilization of surface-mined lands were investigated.

Mined lands were classified on the basis of acidity and texture of the soil material. Both the material in the overburden and the method of mining affected the land classification. Of more than 2,000 soil samples tested, 73 percent had a pH above 7.0 and 90 percent a pH above 5.5. The soil material was found to be very high in available potassium. Texture was predominantly silty clay loam, silty clay, or clay loam. Permeability was found to be rapid on the ridges and moderate on the graded areas.

Grasses and legumes could be successfully established on most of the surface-mined lands in Illinois. Alfalfa, birdsfoot trefoil, sweet clover, lespedeza, bromegrass, orchard grass, Kentucky bluegrass and tall fescue were the most desirable species that could be established. Forage produced was high in nitrogen, phosphorus, calcium, and potassium.

The three-year average daily gain of steers on surface-mined pastures in western Illinois was 1.24 pounds, compared to 1.10 pounds for control steers that grazed on unmined land. In southern Illinois steers grazing surface-mined areas made a two-year average daily gain of 0.95 pound, while steers on improved grass-legume pasture on mined land gained 1.17 pounds. During the 1951 season, 29 lambs made an average daily gain of 0.29 pound on mined land pasture.

Various methods of sowing and preparation of mined land are possible. Seedings were made by hand, with power seeders, and from the air. These methods were used on undisturbed ridges, topped ridges, and more completely graded areas.

The most concentrated and continued use of mined land can be made by incorporating it with surrounding farmland into a well-organized livestock farm unit. (adapted from author's summary)

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1946-1958 PERCENT COMPLETE: 100%

ACCURACY OF DATA: On site experimentation and inspection; greenhouse studies; laboratory analyses.

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: General for Illinois; information provided by county, region, and by plant species.

FORMAT OF DATA: Published Bulletin

106

Grason, D., and R. W. Healy. 1979. Chemical analysis of surface water in Illinois, 1975-1977. Volume II--Illinois River basin and Mississippi River tributaries north of Illinois River basin. U.S. Geological Survey, Water-Resources Investigations 79-24. Prepared in cooperation with Illinois Environmental Protection Agency. 282 p.

INDEX UNDER: Inventory Data - water quality

ABSTRACT: Samples of surface water were collected and analyzed by the Illinois Environmental Protection Agency. The results from water years 1975 to 1977 are presented in tabular form, and the history of sampling and analytical methods during that period are summarized. Stream discharge data from records of the U.S. Geological Survey are included for all sites where samples were collected at gaging stations or near enough that reliable discharge estimates could be made. (authors' abstract)

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1975-1977 PERCENT COMPLETED: 100%

ACCURACY OF DATA: On site collection; Laboratory analyses; U.S. Geological Survey records

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: Specific for sites in Illinois River Basin and Mississippi River tributaries north of the Illinois River Basin.

FORMAT OF DATA: Published Report

107

Greater Egypt Regional Planning & Development Commission. 1978. Area wide waste treatment and water quality management planning - water quality survey data 1976-1977. Greater Egypt Reg. Planning & Dev. Comm., Carbondale, IL. 150 p.

INDEX UNDER: Acid Mine Drainage/ Watershed Depletion/ Metal Pollution/ Inventory Data - water quality/ Franklin, Gallatin, Hamilton, Hardin, Jackson, Jefferson, Perry, Pope, Saline, and Williamson Counties.

ABSTRACT: This report presents water quality monitoring data collected during the 208 Waste Treatment and Water Quality Management Planning program conducted by the Greater Egypt Regional Planning and Development Commission in conjunction with the Southeastern Illinois Regional Planning and Development Commission. The report consists of three sections: 1) a reconnaissance survey to select sites for monitoring programs; 2) a six months monitoring program to determine effects of coal mining on water quality; and 3) a microcell monitoring program to obtain rainfall response information, and data more 'emission oriented'. Each section provides a brief narrative of the sampling program followed by sampling station location descriptions, maps, and the water quality data results for that program. (from transferral letter)

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1976-1977 PERCENT COMPLETED: 100%

ACCURACY OF DATA: On site collection; Laboratory analyses

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: Specific for sites in Franklin, Gallatin, Hamilton, Hardin, Jackson, Jefferson, Perry, Pope, Saline, and Williamson Counties.

FORMAT OF DATA: Published Report

108

Green, B. B., and S. D. Zellmer. 1977. Grundy county demonstration site. Phase II progress report for 1976-77. Argonne National Laboratory, Energy and Environmental Systems Division, Report (1977). 11 p.

INDEX UNDER: Refuse Dumps/ Mine Land Reclamation & Utilization - revegetation/ Grundy County

ABSTRACT: This report describes progress toward elimination of problems associated with pH and low infiltration at the Grundy County Refuse Demonstration Site. Plot establishment; treatments using scrubber slag topsoil, sludge, lime, chemical stabilizers, and straw mulch; and effects of treatments on vegetative cover development are discussed.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1976-1977 PERCENT COMPLETED: On going

ACCURACY OF DATA: On site inspection and research

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: Specific for site in Grundy County, Illinois.

FORMAT OF DATA: Progress Report

109

Griffin, D. W., and D. L. Chicoine. 1974. West central Illinois: a regional profile. Univ. Illinois College of Agriculture, Cooperative Extension Service Special Publication 31, 44 p.

INDEX UNDER: Fulton, Hancock, Henderson, Knox, McDonough, Warren Counties/ Inventory Data - coal resources

ABSTRACT: A general profile of west central Illinois describing the region's people, economy, agriculture, manufacturing, and mining is provided in this report. Data on coal production and acreage mined (through 1971) by county and the acres of land underlain with strippable coal, also by county, are presented.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1974 PERCENT COMPLETED: 100%

ACCURACY OF DATA: Published records, annual reports

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: Specific for Fulton, Hancock, Henderson, Knox, McDonough, and Warren Counties, Illinois.

FORMAT OF DATA: Published Report

110

Grosboll, A. D., and B. Valiukenas. 1976. Research report and recommendations for the house executive sub-committee on mine subsidence. House of Representatives, State of Illinois, Springfield. 37 p.

INDEX UNDER: Subsidence and Slumping

ABSTRACT: This research report examines the problem and causes of coal mine subsidence in Illinois, lists the municipalities affected, discusses legislative action, and offers recommendations for the problem.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1976 PERCENT COMPLETED: 100%

ACCURACY OF DATA: Accumulated from records, previous studies, and published literature

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: Data supplied per municipality in Illinois.

FORMAT OF DATA: Research Report

111

Gruner, D., and W. C. Hood. 1971. Three iron sulfate minerals from coal mine refuse dumps in Perry County, Illinois. Trans. Ill. Acad. Sci. 64:156-158.

INDEX UNDER: Acid Mine Drainage/ Metal Pollution/ Refuse Dumps/ Perry County

ABSTRACT: Three iron sulfate minerals have been found on coal mine refuse dumps in Perry County, Illinois. The occurrences indicate the hydration state of the ferrous sulfate is at least partly dependent upon relative humidity of the microenvironment.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1969-1970 PERCENT COMPLETED: 100%

ACCURACY OF DATA: On site data collection

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: Site specific locations in Perry County, Illinois.

FORMAT OF DATA: Published Report

112

Guerke, M., W. C. Ashby, and C. Kolar. 1978. Fresh reading of an ancient landscape. Illinois Magazine 17(7):30-31.

INDEX UNDER: Mine Land Reclamation & Utilization - recreation/ Will, Grundy Counties/ Surface Water Impoundments

ABSTRACT: A popularized account of recreational use and specifically fishing, in surface mine lakes in Will and Grundy Counties, is provided in this article.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1978 PERCENT COMPLETED: 100%

ACCURACY OF DATA: Supported with published materials

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: General for Will and Grundy County.

FORMAT OF DATA: Magazine Article

113

Guerke, M. L., W. C. Ashby, and C. Kolar. 1979. A different perspective on surface mined land. Illinois Magazine 18(3):31-33.

INDEX UNDER: Mine Land Reclamation & Utilization - industry, urbanization, recreation/ Will, Grundy Counties

ABSTRACT: This article briefly reviews the history of surface mining in Will and Grundy Counties, and subsequent uses of the area for fossil hunting, recreation, residential expansion, and industrial development.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1920's-1979 PERCENT COMPLETED: 100%

ACCURACY OF DATA: Published data; interviews with coal industry personnel

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: General for Will and Grundy Counties, Illinois.

FORMAT OF DATA: Magazine Article

114

Guither, H. D. 1974. Illinois land affected by strip mining. Illinois Agricultural Economics 14(2):13-20.

INDEX UNDER: Mine Land Reclamation & Utilization - general

ABSTRACT: Approximately 172,000 acres of land were affected by surface mining, 14 percent of potentially strippable acreage, in Illinois by 1974. More than 27 years passed from the time when land was first considered for strip mining until stripping was completed and the land reclaimed; the land was unavailable for agricultural purposes during only six of those years. Land utilization shifted from crop and pasture to primarily pasture after mining was completed.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1972 PERCENT COMPLETED: 100%

ACCURACY OF DATA: Published Reports

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: General for Illinois; data provided by county.

FORMAT OF DATA: Published Article

115

Guither, H. D. 1974. Tax revenues from lands affected by strip mining. Illinois Research 16(4):16-17.

INDEX UNDER: Other - taxation/ Fulton, Knox, Perry Counties

ABSTRACT: Reviews of tax revenues on surface mined and unaffected lands are compared for the Illinois Counties of Fulton, Knox and Perry. Coal companies have consistently had higher assessed valuations and paid higher taxes than have other owners. In Fulton and Perry Counties assessed values and paid taxes have been higher on affected land than on unaffected; the reverse is true of Knox County. Land utilization after mining affects taxation rates.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1935-1970 PERCENT COMPLETED: 100%

ACCURACY OF DATA: County records

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: Specific for Fulton, Knox, and Perry Counties; data by county and year.

FORMAT OF DATA: Published Article

116

Hardin, M. E., D. R. Kostelc, B. G. Peterjohn, J. Casson, J. W. Hardin, and W. D. Klimstra. 1976. A field study of selected fauna for the Coalcon Clean Liquid Boiler Fuels Demonstration Plant site. Cooperative Wildlife Research Laboratory, Southern Illinois University, Carbondale. 128 p.

INDEX UNDER: Mine Land Reclamation & Utilization-general/ Other-environmental assessment/ St. Clair County

ABSTRACT: Results of a field investigation of mammals and birds on the Coalcon Clean Liquid Boiler Fuels Demonstration Plant site are presented in this report. Thirty species of mammals and 121 bird species were recorded on the study area. Distribution, abundance and diversity of mammals and birds are provided for the 13 habitat types examined. A brief discussion of the impact of the clean boiler fuel plant on mammals and birds, and their associated habitats was included.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1976 PERCENT COMPLETED: 100%

ACCURACY OF DATA: On site observation; published records

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: Specific for Coalcon demonstration site, St. Clair County, Illinois.

FORMAT OF DATA: Published Report

117

Haynes, R. J. 1972. Survey of coal surface-mined areas in Illinois. Annual report 1971-1972. Coop. Wildl. Res. Lab., Southern Illinois University, Carbondale 4 p.

INDEX UNDER: Mine Land Reclamation & Utilization-general

ABSTRACT: This report reviews the status of a survey, initiated in 1970, of all lands in Illinois affected by surface-mining for coal.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1971-1972 PERCENT COMPLETED: On going

ACCURACY OF DATA: Quarterly reports of CWRL--SIU-C; on-site inspection; personal communications

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: General for Illinois.

FORMAT OF DATA: Annual Report

118

Haynes, R. J., and S. R. Jewell. 1973. A survey of lands surface-mined for coal in Illinois. I. Illinois surface-mined lands affected prior to January 1, 1962 (pre-law). A preliminary report. Coop. Wildl. Res. Lab., Southern Illinois University - Carbondale. 70 p.

INDEX UNDER: Mine Land Reclamation & Utilization - general/ Inventory Data - mined lands survey

ABSTRACT: The Cooperative Wildlife Research Laboratory, Southern Illinois University at Carbondale conducted in 1970 and 1971 a survey of lands in Illinois affected by surface mining for coal prior to January 1, 1962 (pre-law) to update existing knowledge of the acreage, ownership, condition, and utilization of these lands. The total affected land encompassed 109,026 acres. The majority of the affected land is in private or coal company ownership (81,329 acres) and is in pasture or organized recreation land, or is not utilized (89,942 acres). Most of the spoilbanks have greater than 24 percent ground cover (77,549 acres). Only a small percentage of the land constitutes a severe pollutional problem and the reclamation of the land, although necessary, must be scientifically planned and executed to produce long-term environmental gains. (author's abstract)

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1970-1972 PERCENT COMPLETED: 100%

ACCURACY OF DATA: On site inspections; maps; aerial photographs; county records; Dept. Mines & Minerals data files.

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: Data provided by county in Illinois.

FORMAT OF DATA: Preliminary report

119

Haynes, R. J., and W. D. Klimstra. 1975. Illinois lands surface mined for coal. Coop. Wildl. Res. Lab., Southern Illinois University, Carbondale. 201 p.

INDEX UNDER: Erosion/ Surface Water Impoundments/ Acid Mine Drainage/ Slides/ Metal Pollution/ Highwalls/ Refuse Dumps/ Inventory Data - mined land survey

ABSTRACT: The Cooperative Wildlife Research Laboratory, Southern Illinois University at Carbondale, surveyed all lands in Illinois affected by surface mining as of June 30, 1971. The purpose of this survey was to update existing knowledge of the acreage, ownership, condition, and utilization of these lands. Based on interpretation of data collected during the survey, problem areas were defined and located. Problem areas represented extreme conditions from the standpoint of their unsightliness and lack of contribution to local economics; also acid-producing materials contributed to pollution of adjacent areas.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1970-1971　　PERCENT COMPLETED: 100%

ACCURACY OF DATA: On site inspection, county plat books, highway maps, aerial photos, coal surface mining records of Midwest Coal Producers, Inc.

QUANTITIES OF DATA: Data summary, computer tape

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy report

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: Data recorded by county within Illinois; some site specific information.

FORMAT OF DATA: Published Report, computer tape

120

Haynes, R. J., and W. D. Klimstra. 1975. Some properties of coal spoilbank and refuse materials resulting from surface-mining coal in Illinois. Coop. Wildl. Res. Lab., Southern Illinois University-Carbondale, and Illinois Institute for Environmental Quality. IIEQ Document No. 75-21. 126 p.

INDEX UNDER: Refuse Dumps/ Acid Mine Drainage/ Metal Pollution/ Inventory Data - spoilbank properties

ABSTRACT: This report describes the relationship between selected chemical and physical parameters of spoilbank material and coal seam, vegetation density, and age of spoilbanks. Chemical analysis of slurry and gob refuse revealed that these areas provided an unsuitable medium for plant growth. Comments on reclamation of problem spoilbanks and refuse sites are provided. Some 22 tables and 15 figures provide data relative to the chemical and physical properties of spoilbank and refuse material.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1970-1971 PERCENT COMPLETED: 100%

ACCURACY OF DATA: On site inspection and collection; Laboratory analyses

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: Data collection site specific and by county in Illinois.

FORMAT OF DATA: Published Report

121

Healy, R. W., and L. G. Toler. 1978. Chemical analyses of surface water in Illinois, 1958-74. Volume III - Ohio River tributaries and Mississippi River tributaries south of Illinois River basin. U.S. Geological Survey, Water-Resource Investigations 78-24. Prepared in cooperation with Illinois Environmental Protection Agency.

INDEX UNDER: Inventory Data - water quality

ABSTRACT: Samples of surface water were collected and analyzed by the Illinois Environmental Protection Agency and its predecessor, the Stream Pollution Control Bureau of the Illinois Department of Public Health. The results for the period 1958 to 1974 are presented in tabular form and the history of sampling and analytical method are summarized. Stream discharge data from records of the U.S. Geological Survey are included for all sites where samples were collected at gaging stations or near enough that reliable discharge estimates could be made. (author's abstract)

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1958-1974 PERCENT COMPLETED: 100%

ACCURACY OF DATA: On site collection; Laboratory analyses; U.S. Geological Survey records

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: Site specific for collecting stations on Ohio and Mississippi River tributaries.

FORMAT OF DATA: Published report

122

Hendricks, C. 1972. Palzo: a project in acid land and water restoration via recycling of treated wastes. IN The Earth Around Us. Proc. Ann. Meeting Soil Conser. Soc. Amer. 27:66-69.

INDEX UNDER: Acid Mine Drainage/ Metal Pollution/ Mine Land Reclamation & Utilization-sewage sludge/ Williamson County/ Indiana, Pennsylvania, West Virginia

ABSTRACT: A brief description of the Palzo surface-mined area in southern Illinois and utilization of digested sewage sludge to reclaim the area are provided in this article. Information on geology before and after mining, mine drainage runoff, and pre- and post-treatment concentrations of heavy metals in subsurface runoff from established plots is provided in tabular format. Sludge can be utilized on acid spoils to improve soil pH and water quality, and to help provide an environment suitable for vegetation establishment.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1959-1972 PERCENT COMPLETED: On going

ACCURACY OF DATA: On site investigation; published records

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: Specific for Palzo site in southern Illinois. Some information on drainage for Indiana, Pennsylvania and West Virginia.

FORMAT OF DATA: Published Article

123

Hinchman, R., A. Dvorak, and J. Jastrow. 1976. Progress report on studies of germination and early growth of grasses and legumes in layered materials--strip mine spoil or mine refuse covered by topsoil. Argonne National Laboratory, Division of Environmental Impact Studies, Land Reclamation Laboratory. 7 p.

INDEX UNDER: Refuse Dumps/ Illinois Related/ Mine Land Reclamation & Utilization - revegetation, fly ash/ Grundy, Macoupin Counties

ABSTRACT: This progress report describes results from ongoing experiments designed to characterize germination, survival, growth, vigor and early success of select grass species grown on layered material consisting of strip mine spoil or mine refuse covered by topsoil, and spoil and gob alone. Response of roots relative to biomass production and gross morphology to interface between topsoil and layered materials was examined. Response of orchard grass and blackwell switchgrass was demonstrated by included figures. Experiments being conducted on 23 species of grasses and four legumes were outlined.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1975-1976 PERCENT COMPLETED: On going

ACCURACY OF DATA: On site collection and experimentation; greenhouse pot studies

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: Specific for sites in Grundy and Macoupin Counties, Illinois.

FORMAT OF DATA: Progress report

124

Hoglund, B. M., and J. G. Asbury. 1974. Potential sites for coal conversion facilities in Illinois. Illinois Institute for Environmental Quality, Doc. No. 74-60. 121 p.

INDEX UNDER: Acid Mine Drainage/ Metal Pollution/ Other - coal reserves

ABSTRACT: This report describes the selection processes for potential sites for coal conversion facilities in the state of Illinois. Data presented include coal mining statistics for Illinois (1920-1972), analysis of Illinois coals, potential environmental contaminants from coal gasification, trace elements in condensate from Illinois No. 6 coal gasification tests, coal reserves in Illinois by county and coal seam, and Illinois low-sulfur reserves in the ground. Six sites were selected for potential coal conversion facilities in Illinois.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1920-1974 PERCENT COMPLETED: 100%

ACCURACY OF DATA: Published reports

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: Data general for Illinois; much information provided by county and coal seam.

FORMAT OF DATA: Published Document

125

Holmes, L. A. 1944. Reclaiming stripped lands in Illinois. Scientific Monthly, 59:414-420.

INDEX UNDER: Mine Land Reclamation & Utilization - forestation, recreation, pasture

ABSTRACT: Early reclamation practices included forestation, forage crop production (pasture), recreation area development, and game preserve establishment. These methods of reclaiming surface-mined lands in Illinois are discussed in this article.

SUPPLEMENTARY INFORMATION

TIME PERIOD: --1944 PERCENT COMPLETED: N/A

ACCURACY OF DATA: Source unknown

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: General for Illinois.

FORMAT OF DATA: Published Article

126

Hook, L. A. 1979. Effects of copper, zinc, and cadmium on *Ictalurus natalis* resulting from sewage sludge reclamation of strip mined land. M. A. thesis, Southern Illinois University-Carbondale. 139 p.

INDEX UNDER: Metal Pollution/ Mine Land Reclamation & Utilization - sewage sludge/ Williamson County

ABSTRACT: This study assesed potential effects on the aquatic environment of metallic contaminants (Cu^{2+}, $2n^{2+}$, Cd^{2+}) contained in anaerobically digested sewage sludge utilized to reclaim abandoned coal strip mined land. *Ictalurus natalis* were exposed to sludge in model ecosystems and Cu, Zn, and Cd concentrations were monitored. Increased quantities of Cu and Zn bound per molecule of metallothionein, a heavy metal bonding protein, isolated from liver and kidney, correlated with increased sludge levels and may serve as an indicator of an organism's exposure to subcritical metal concentrations. In addition, the effects of various application rates of agricultural lime and sludge to the mine spoil on solubility of Cu, Zn, and Cd were determined. Generally, lime and/or sludge application reduced the quantities of water soluble Cu, Zn, and Cd. However, sludge treatment greatly increased the total amounts of Cu, Zn, and Cd extracted as exchangeable, absorbed, organic, carbonate, and sulfate bound. The potential exists for sludge-metal complexes to decompose with the ultimate release of metals to the aquatic environment. (*author's abstract*)

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1975-1979 PERCENT COMPLETED: 100%

ACCURACY OF DATA: On site collection; laboratory analyses and experimentation

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: Samples collected only from Palzo project, Williamson County, Illinois.

FORMAT OF DATA: Unpublished M.A. Thesis

127

Hopkins, M. E. 1975. Geologic factors relating to minability of Illinois coals. Proc. 2nd Inter-University Energy Conf., Constraints on Coal Utilization, p. 66-67.

INDEX UNDER: Other - geology of coal

ABSTRACT: Minability of Illinois' coal seams is affected by thickness and continuity of coal seam, depth to coal, nature and amount on impurities in coal, character of overlying and underlying strata, and amount and character of water in coal and associated strata.

SUPPLEMENTARY INFORMATION

TIME PERIOD: N/A PERCENT COMPLETED: 100%

ACCURACY OF DATA: Records of Illinois State Geological Survey

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: General for Illinois.

FORMAT OF DATA: Published Abstract

128

Hopkins, M. E., and J. A. Simon. 1974. Coal resources of Illinois. Ill. State Geological Survey, Ill. Minerals Note 53, 24 p.

INDEX UNDER: Illinois Related/ Other - coal reserves

ABSTRACT: This report provides information on the coal reserves and resources of Illinois. The estimated coal reserves of the United States are provided by rank, sulfur content and state; a discussion of Illinois reserves is also provided. Sections of the paper discuss Illinois coal as it relates to quality, rank, and sulfur content; importance to the state; productivity and employment; and uses for the coal. A discussion of coal-related problems concludes the report.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1973 PERCENT COMPLETED: 100%

ACCURACY OF DATA: Published records and reports

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: Specific for Illinois; data by county as percent strippable and total coal reserves.

FORMAT OF DATA: Published Note

129

Humphrey, S. A. 1970. A qualitative survey of the macroinvertebrates from three acid-polluted strip-mine lakes. Unpublished Research Report, Southern Illinois University - Carbondale. 31 p.

INDEX UNDER: Surface Water Impoundments/ Williamson & Jackson Counties/ Mine Land Reclamation & Utilization - wildlife

ABSTRACT: This report presents the findings of an investigation of 3 acid polluted surface-mine lakes in southern Illinois. Physico-chemical analysis indicated a lack of turbidity, high concentration of sulfate ion, and high conductivities. The most acid lake contained a high concentration of dissolved and precipated iron compounds. Of 37 forms of macroinvertebrates collected in benthic samples all but one were insects; Chironomus attenuatus was the most abundant animal collected.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1969 PERCENT COMPLETED: 100%

ACCURACY OF DATA: On site investigation; laboratory analyses

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: Site specific for lakes in Williamson and Jackson Counties, Illinois.

FORMAT OF DATA: Unpublished M.S. Research Report

130

Illinois Department of Public Health. 1960. Mine waste control program Technical Release 20-12A and mine drainage control measure Technical Release 20-12. Illinois Department of Public Health, Division of Sanitary Engineering, Sanitary Water Board. 3 p.

INDEX UNDER: Acid Mine Drainage/ Other - regulations

ABSTRACT: These Technical Releases describe the Mine Waste Control Program and the Mine Drainage Control Measure of the Illinois Department of Health. The Mine Waste Control Program investigates complaints, observes mine discharges, and routinely catalogs active and passive mines. Procedures for investigations are delineated. The Mine Drainage Control Measure provides 'measures' necessary for the control of mine drainage pollution.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1960 PERCENT COMPLETED: On going

ACCURACY OF DATA: N/A

QUANTITIES OF DATA: Program summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: Regulation of mine discharge general for Illinois.

FORMAT OF DATA: Technical releases

131

Illinois Department of Mines and Minerals. 1976. Surface mining and land reclamation in Illinois. Ill. Dept. Mines and Minerals, Information Summary. 4 p.

INDEX UNDER: Mine Land Reclamation & Utilization - general

ABSTRACT: This information summary very succinctly states facts about surface mining and reclamation in Illinois. The three surface mine reclamation laws of Illinois are listed and the basic requirements of each are briefly explained.

SUPPLEMENTARY INFORMATION

TIME PERIOD: N/A PERCENT COMPLETED: 100%

ACCURACY OF DATA: Illinois Dept. Mines & Minerals data files

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: General for Illinois.

FORMAT OF DATA: Information summary

132

Illinois Department of Mines and Minerals. 1881-1979. Annual coal, oil and gas reports - 1881-1979. Illinois Department of Mines and Minerals.

INDEX UNDER: Mine Land Reclamation & Utilization - general / Other-coal industry

ABSTRACT: These annual reports provide detailed information concerning Department of Mines and Minerals staff and operations; directors of mines and mines opened, suspending operations, or abandoned during the reporting year; production of coal per man-day, month, county, and seam; labor and employment relative to fatal and non-fatal accidents, hours worked, and output of coal; and mechanization of the industry. Also included are individualized accounts from the Explosive Division, Division of Land Reclamation, and Division of Oil and Gas.

Contained within the Explosives Division reports are tables listing certificates of compliance compiled in association with company, county, pounds of explosives, blasting caps and fees; and explosive licenses issued during that year. The Division of Land Reclamation supplement contains summaries of the administration of Illinois surface mining laws (after effective dates); affected acreage and reclamation status; reclamation plans; non-compliance and bond forfeitures; and total affected acreage by county and refuse disposal permit. Data are provided in tabular form. The Division of Oil and Gas report provides summaries by county of the number of permits issued, oil wells completed, and wells plugged; and the number of water wells, salt water disposal wells, and waste disposal permits issued during the year of the report. All pertinent data are supplied in tabular format.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1881-1979 PERCENT COMPLETED: 100%

ACCURACY OF DATA: Illinois Dept. Mines & Minerals record files; company records; on site inspections

QUANTITIES OF DATA: Data summaries

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: Information supplied by year, county, coal mining regions of Illinois, company.

FORMAT OF DATA: Annual Reports

133

Illinois Department of Mines and Minerals. ca 1979. Maps of mined out areas. Illinois Department of Mines and Minerals, Springfield.

INDEX UNDER: Inventory Data - mined out areas/ Open Entrances

ABSTRACT: This collection contains final mine maps identifying the extent and location of underground mined out areas including locations of rooms, pillars, main haulageways, entry and air/escape shafts or slopes. Also identified are surface features such as tipple structures and roads. Maps are available for approximately 1700 Illinois mines. Original maps have recently been placed on microfilm by the U.S. Bureau of Mines. Both the original maps and microfilm copies are located at the Illinois Department of Mines and Minerals office in Springfield, Illinois.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1979 PERCENT COMPLETED: less than 50%

ACCURACY OF DATA: Company records

QUANTITIES OF DATA: Approximately 1700

EST. COST & TIME FOR DATA REPRODUCTION: N/A

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: Maps are site specific for approximately 1700 underground mines in Illinois.

FORMAT OF DATA: Mined out area maps.

134

Illinois Environmental Protection Agency. ca 1972. Environmental Protection Agency--Mine Drainage Strike Force. Ill. E.P.A., Mine Drainage Strike Force.

INDEX UNDER: Acid Mine Drainage/ Inventory Data - water quality

ABSTRACT: The Illinois Environmental Protection Agency's Mine Drainage Strike Force completed site specific evaluations of selected mine sites which exhibited potential for mine drainage. Evaluations included physical descriptions of approximately 471 mine sites in 16 southern Illinois Counties and chemical analyses of mine drainage for approximately 200 of the sites.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1972 PERCENT COMPLETED: Unknown

ACCURACY OF DATA: On site inspections

QUANTITIES OF DATA: 471 mine sites in 16 counties

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: Data specific by site and county in southern Illinois.

FORMAT OF DATA: Site descriptions; Lab reports

135

Illinois Environmental Protection Agency. ca 1974. Mine related pollution. Illinois E.P.A. Pollution Control Board, Regulations, Chapter 4. 15 p.

INDEX UNDER: Acid Mine Drainage/ Refuse Dumps/ Other - regulations

ABSTRACT: This chapter of the Illinois Environmental Protection Agency Pollution Control Board Regulations describes procedural safeguards required and effluent standards which are applicable to any point of discharge to prevent pollution of air and water caused by failure to plan with regard to proper environmental safeguards the location, operation and abandonment of mining and mine refuse areas. Procedures to prevent pollution from and the creation of the multitude of contaminating point- and non-point discharges, visible and hidden, continuous and fluctuating, which are potentially present in any mining or mine waste operation are described. (from text of chapter)

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1974-- PERCENT COMPLETED: N/A

ACCURACY OF DATA: N/A

QUANTITIES OF DATA: Chapter of Regulations

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: Specific for Illinois.

FORMAT OF DATA: Chapter of Regulations

136

Illinois Environmental Protection Agency. 1976. Water quality management basin plan - Phase I. Illinois Environmental Protection Agency, Division of Water Pollution Control, Planning and Standards Section.

INDEX UNDER: Acid Mine Drainage/ Watershed Depletion/ Metal Pollution/ Inventory Data - water quality

ABSTRACT: The primary purpose of water quality planning in Illinois is: to provide decision makers with an up-to-date assessment of water quality and information necessary to make centralized and coordinated decisions; to encourage water quality objectives which consider state policies and programs; and to furnish guidance in the development of an annual program. Phase I plan was to identify water quality problems of the basins under study and to establish an interim program to alleviate recognized problems. Areas of water qualities analyzed include: 1) identification of problems; 2) assessment of needs and waste load reduction requirements; 3) schedule of actions; 4) planning needs; 5) water quality indices; 6) aquatic life surveys; 7) maps of counties and basins; and 8) soil erosion and lakes. Phase I reports are organized in four volumes which include information on existing water quality, county maps, discharge information sheets, and facility planning area maps, respectively. The discharge information sheets include specific data on wastewater treatment facilities, permitted feedlots, public water supply facilities, deep well disposal sites, permitted mines, and operating solid waste disposal sites; and nonpoint sources of wastewater from mines, feedlots, deepwells, landfills, and water supplies. Also included is discharge information for mine related water quality violations for stream segments affected by mining activities. Studies have been completed on the following 14 river basins in Illinois: Mississippi River North, Mississippi River North Central, Mississippi River South Central, Mississippi River South, Ohio River, Big Muddy River, Wabash River, Kaskaskia River, Des Plaines River and Lake Michigan, Fox River, and Rock River.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1974-1976 PERCENT COMPLETED: 100% (Phase I)

ACCURACY OF DATA: Published and unpublished records; on site evaluation and collection; laboratory analyses.

QUANTITIES OF DATA: 14 Basin studies

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: Specific for sites within 14 river basins in Illinois.

FORMAT OF DATA: Published Volumes

137

Illinois Environmental Protection Agency. ca 1978. An Illinois environmental issue: water resources and coal mining. Illinois Environental Protection Agency Bulletin #1. 17 p.

INDEX UNDER: Acid Mine Drainage/ Metal Pollution

ABSTRACT: This publication reports on the development of Illinois Coal Mining and discusses federal and state regulations regarding mine area water resource protection.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1978 PERCENT COMPLETED: 100%

ACCURACY OF DATA: Published Data

QUANTITIES OF DATA: Data Summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: General data for Illinois; some site specific references.

FORMAT OF DATA: Published Report

138

Illinois Environmental Protection Agency. 1979. Water quality management plan. Volume IV - nonpoint sources of pollution - urban stormwater - construction site erosion - mining activities - hydrographic modification - point sources of pollution. Ill. E.P.A., Division of Water Pollution Control, Planning and Standards Section. p. 122-135.

INDEX UNDER: Acid Mine Drainage/ Metal Pollution/ Refuse Dumps

ABSTRACT: A discussion of various nonpoint and point sources of water pollution in Illinois is provided in this volume. Water quality problems associated with each source and recommendation for their control or mitigation are presented. Environmental problems associated with coal mining include water pollution from active and abandoned surface and underground mines, mineral processing plants, mine waste disposal areas, and haulage roads; and the disruption and often permanent despoilation of large areas of land. A discussion of the existing data base for Illinois included surveys on Illinoi land surface mined for coal, lands affected by underground mining and problem sites associated with underground coal mining by the Cooperative Wildlife Research Laboratory of Southern Illinois University at Carbondale; Southern Illinois 208 Mine Waste Control Program conducted by Energy and Environmental Analysis, Inc., for the Greater Egypt Regional Planning and Development Commission; Illinois Department of Mines and Minerals data files; and the Illinois Environmental Protection Agency water quality monitoring stations. Approaches to mine-related pollution problems include regulatory mechanisms at the state and federal level, analytical mechanisms of the Southern Illinois 208 Mine Waste Control Program and a benefit-cost system of decision making for surface-mined land reclamation. Recommendations for water pollution control from mining operations are enumerated.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1979 PERCENT COMPLETED: 100%

ACCURACY OF DATA: Published data; on site inspection; data files of state agencies.

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: General for Illinois.

FORMAT OF DATA: Published Volume

139

Illinois Institute for Environmental Quality. 1972. Illinois surface-mined land regulation and reclamation: interim report. Illinois Institute for Environmental Quality, Chicago. 10 p.

INDEX UNDER: Other - regulations/ Mine Land Reclamation & Utilization - general

ABSTRACT: This interim report on Illinois surface-mined land regulation and reclamation describes the progress of all strip mine control and reclamation programs currently underway. The co-ordinated pattern of action covering all of the major strip mine problems in the state are described and discussed.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1971-1972 PERCENT COMPLETED: N/A

ACCURACY OF DATA: Illinois regulations

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: General for state of Illinois.

FORMAT OF DATA: Printed Report

140

Illinois Institute for Environmental Quality. 1972. Program development: surface-mined land reclamation. IN Illinois Institute for Environmental Quality, Annual Report, 1972. p. 9-10.

INDEX UNDER: Acid Mine Drainage/ Refuse Dumps/ Mine Land Reclamation & Utilization - general

ABSTRACT: Status of surface-mined lands in Illinois, efforts at controlling present and future mining, and reclaiming lands mined in the past are reviewed in this annual report. Mined land inventories and establishment of demonstration projects by the Institute for Environmental Quality are discussed. Steps toward elimination of acid mine drainage are outlined.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1970-1972 PERCENT COMPLETED: 100%

ACCURACY OF DATA: Agency record files

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: General for Illinois.

FORMAT OF DATA: Annual Report

141

Illinois Institute for Environmental Quality. 1973. A data summary of existing pre-law surface mined area conditions. Argonne National Laboratory, Center for Environmental Studies. 35 p.

INDEX UNDER: Inventory Data - pre-law mined lands/ Mine Land Reclamation & Utilization - general

ABSTRACT: This report is a preliminary summation of data collected during a state-wide survey of all lands affected by surface mining prior to January 1, 1962 (pre-law) by the Cooperative Wildlife Research Laboratory at Southern Illinois University-Carbondale. The survey was supported by the Illinois Department of Conservation, Department of Mines and Minerals, and the Institute for Environmental Quality.

SUPPLEMENTARY INFORMATION

TIME PERIOD: Prior to 1962 PERCENT COMPLETED: 100%

ACCURACY OF DATA: Aerial photos, maps, on site inspections

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: Site specific, county, and state-wide acreage totals provided.

FORMAT OF DATA: Published computer printouts

142

Illinois Institute for Environmental Quality. 1975. Preliminary investigation of Little Dog Mine at Gillespie, Illinois. Illinois Institute for Environmental Quality. 18 p.

INDEX UNDER: Erosion/ Refuse Dumps/ Macoupin County

ABSTRACT: This report describes results of a preliminary investigation of a refuse dump at the Little Dog Mine at Gillespie, Illinois. The investigation was to serve as an introduction to the site as a potential area for future reclamation. A two part plan was proposed for the reclamation procedure.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1975 PERCENT COMPLETED: 100%

ACCURACY OF DATA: On site visitation

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: Specific for Little Dog Mine at Gillespie, Illinois.

FORMAT OF DATA: Published Report

143

Illinois State Geological Survey. 1974. Description of Illinois coal seams. Keystone Coal Industry Manual. p. 484-492.

INDEX UNDER: Inventory Data - coal reserves

ABSTRACT: This section of the Keystone Coal Industry Manual provides a description of the coal seams in Illinois. Included are sections on the general character of coals, nomenclature of coal pertinent to Illinois, mining areas of Illinois, coal seam thickness and reserves, and coal analysis tables for each seam in Illinois.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1974 PERCENT COMPLETED: 100%

ACCURACY OF DATA: Published reports of Illinois State Geological Survey

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: Specific for Illinois; information by coal seam and county.

FORMAT OF DATA: Published Report

144

Illinois State Geological Survey. 1976. Mined-Out Coal Area Maps: 1-33. Illinois State Geological Survey.

INDEX UNDER: Open Entrances/ Subsidence and Slumping/ Inventory Data - mined out areas

ABSTRACT: Maps are available from the Illinois State Geological Survey which display mined-out coal areas of Illinois. Major streams and lakes, county boundaries, Township, Range, and Section are indicated on the maps. Mined out areas are indicated by type of mining (deep or surface), company, and if the mine is active or abandoned; date of abandonment is provided when available. Presence of active or abandoned shaft, slope, or drift mine sites, and small surface mines or surface mine tipples are indicated. A total of 33 area maps are available which cover all areas affected by mining for coal in Illinois.

SUPPLEMENTARY INFORMATION

TIME PERIOD: --1976 PERCENT COMPLETED: 100%

ACCURACY OF DATA: Company records; state agencies' record files

QUANTITIES OF DATA: 33 maps

EST. COST & TIME FOR DATA REPRODUCTION: Available Ill. State Geological Survey for $1 each

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: Site specific information provided on maps for all coal mining areas in Illinois.

FORMAT OF DATA: Maps

145

Illinois Watershed Planning Staff. 1969. South fork of Saline River watershed; Saline, Williamson, Johnson, and Pope Counties, Illinois. Preliminary investigation report. U.S.D.A., Soil Conservation Service, Champaign. 12 p.

INDEX UNDER: Erosion/ Acid Mine Drainage/ Watershed Depletion/ Saline, Williamson, Johnson, Pope Counties

ABSTRACT: This is a preliminary study to determine measures needed to relieve flooding, drainage, and other soil and water related problems in the watershed and the estimated costs and benefits of these measures. While this is a general study not directly related to mining problems many aspects of mine drainage pollution are accommodated indirectly.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1969 PERCENT COMPLETED: 50%

ACCURACY OF DATA: Previous studies;aerial photo; topographic maps; stream guage & rainfall records; on site observation; interviews

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: Data concerning south fork of Saline River watershed by county in Illinois.

FORMAT OF DATA: Typed Report

146

Imhoff, E. A., T. O. Friz, and J. R. LaFevers. 1976. A guide to state programs for the reclamation of surface mined areas. U.S. Dept. Interior, Geological Survey, Circular 731. 33 p.

INDEX UNDER: Mine Land Reclamation & Utilization - general/ Other-regulations

ABSTRACT: This report provides a brief synopsis of state programs for reclamation of surface-mined lands. An overview of mining techniques and federal and state regulations that control or dictate reclamation is presented. A directory of state sources of information on surface mined land reclamation programs is included.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1975 PERCENT COMPLETED: 100%

ACCURACY OF DATA: Results of surveys sent to state agencies

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: General for U.S.; information for several states including Illinois provided.

FORMAT OF DATA: Published Article

147

Jacobson, B. N., and M. H. Kelly. 1978. Chemical and biological aspects of water quality in two southern Illinois watersheds. Cooperative Wildl. Res. Lab., Southern Illinois University-Carbondale. 99 p.

INDEX UNDER: Erosion/ Acid Mine Drainage/ Metal Pollution/ Refuse Dumps/ Williamson, Saline Counties

ABSTRACT: This investigation was designed to provide chemical and biological baseline data for streams in Brushy Creek, and Bankston Fork watersheds in Illinois, in order to measure the success of reclamation efforts through the evaluation of the change in water quality associated with mining. (data restricted)

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1975 PERCENT COMPLETED: 100%

ACCURACY OF DATA: On site study and sample collection; Laboratory analyses

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Not available

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: Specific for Brushy Creek and Bankston Fork watersheds in Williamson and Saline Counties, Illinois.

FORMAT OF DATA: Printed Report

148

Jankousky, C. K. 1977. Disposal of coal refuse slurry underground. Mining Congress J. 63(9):68-71.

INDEX UNDER: Refuse Dumps/ Subsidence and Slumping/ Pennsylvania, Wyoming

ABSTRACT: This report discussed the practice of hydraulic backfilling of abandoned deep mines as a refuse slurry disposal method. This practice is an efficient means of subsidence control and provides for the disposal of refuse slurry.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1977 PERCENT COMPLETED: 100%

ACCURACY OF DATA: Published Data

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: Site specific for locations in Scranton, Pennsylvania; Rock Springs, Wyoming; and Orient #4 Mine in Illinois.

FORMAT OF DATA: Published Report

149

Jansen, I. J. 1977. Research toward reclamation of surface-mined land for row-crop production. Fifth Symposium on Surface Mining and Reclamation, National Coal Association/Bituminous Coal Research, Inc., Coal Conf. & Expo IV. p. 25-27.

INDEX UNDER: Mine Land Reclamation & Utilization - row crop, agriculture

ABSTRACT: This brief paper outlines research on row-crop production on surface-mined lands in Illinois. The research objective was to acquire data that would provide for improved reclamation of lands surface-mined in Illinois. Sites were being established to evaluate the practice of segregating and replacing darkened surface soil and any difference in root media replacement by dragline, wheel, and shovel. Both the thin soils of southern Illinois and the thick, dark prairie soils of western Illinois were to be examined.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1976-- PERCENT COMPLETED: On going

ACCURACY OF DATA: On site study; Laboratory analyses; maps; aerial photos

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: General for Illinois.

FORMAT OF DATA: Published Article

150

Jewell, M. E. 1922. The fauna of an acid stream. Ecology 3:22-28.

INDEX UNDER: Acid Mine Drainage/ Franklin, Williamson, and Jackson Counties

ABSTRACT: This article summarizes results of a survey of the fauna of the Big Muddy River, an acid stream in southern Illinois. Hydrogen-ion concentration of the water varied betwwen pH 5.8 and 7.2. Bottom fauna was characterized by abundance of clams and shrimp, and the absence of branchiate snails and ephemerid nymphs. (from conclusion)

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1919 PERCENT COMPLETED: 100%

ACCURACY OF DATA: On site collection

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: Specific for Big Muddy River in Franklin, Williamson, and Jackson Counties.

FORMAT OF DATA: Published Article

151

Jewell, S. R., and R. J. Haynes. 1972. Research on strip-mined land by the Cooperative Wildlife Research Laboratory, S.I.U. Proceedings of the Illinois Mining Institute, Annual Meeting, Oct. 5-6, Springifeld, Illinois. p. 76-86.

INDEX UNDER: Mine Land Reclamation & Utilization - general/ Perry, Saline Counties

ABSTRACT: This report describes research conducted by the Cooperative Wildlife Research Laboratory at Southern Illinois University-Carbondale on surface-mined lands between 1952 and 1972. Of primary importance to this research was the Pyatts Research Area in Perry County; a 920-acre tract of land mined between 1932 and 1950. Studies on soil, vegetation, mammal and bird populations, and various habitat improvements are outlined. The response of bobwhite quail (Colinus virginianus) and cottontail rabbits (Sylvilagus floridanus) to habitat improvements are discussed. Additional research activities on the Pyatts Area included ecology of muskrats (Ondatra zibethica), aquatic plants and effects of physico-chemical water factors, and the ecology of herpetofauna. Two state-wide surveys were conducted; one to delineate lands suitable and available for aquisition for public recreation, the second to characterize all land affected by surface-mining in Illinois. Studies on Spoils include a comparison of "shovel versus wheel" excavation and associated spoil condition, and a soil chemistry study at the Will Scarlet Mine near Stonefort, Illinois.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1952-1972 PERCENT COMPLETED: N/A

ACCURACY OF DATA: Published data and records of the Coop. Wildl. Res. Lab. at SIU-C

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: General for Illinois; specific for Pyatts Research Area, Perry County and Will Scarlet Mine, Saline County.

FORMAT OF DATA: Published Article

152

Jewell, S. R., and R. J. Haynes. 1973. A survey of the status of Illinois coal surface-mined lands created prior to January 1, 1962 (pre-law). 1st Res. & Appl. Technol. Symp. on Mined-land Reclamation. Bituminous Coal Research, Inc., Pittsburgh, Pa. p. 334-350.

INDEX UNDER: Surface Water Impoundments/ Refuse Dumps/ Inventory Data - pre-law mined lands

ABSTRACT: This report describes a survey conducted by the Cooperative Wildlife Research Laboratory at Southern Illinois University-Carbondale to update existing knowledge of the acreage, ownership, condition, and utilization of pre-law surface mined lands in Illinois. Only a sample of the data accumulated during the survey is provided in this report.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1970-1971 PERCENT COMPLETED: 100%

ACCURACY OF DATA: State, county, company records; published data; aerial photo; maps; on site inspections

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: Data collected by region in Illinois.

FORMAT OF DATA: Published Article

153

Jolley, W. R., and P. R. Fitzgerald. 1976. Sludge in the pasture? Illinois Research 18(3):10-11.

INDEX UNDER: Mine Land Reclamation & Utilization - sludge, pasture/ Fulton County

ABSTRACT: This paper presents preliminary results of the effects of sewage sludge application to surface-mined land reclaimed as pasture. Information from soil and vegetation analysis for effects of nutrients, heavy metals and polychlorinated biphenyls, and the results of digestion on various parasites is provided. Needs for further research are discussed.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1974-1976 PERCENT COMPLETED: On going

ACCURACY OF DATA: On site inspection; Laboratory analyses

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: Specific for Fulton County, Illinois.

FORMAT OF DATA: Published Paper

154

Jurich, J. F. 1954. This is Franklin County. Benton Evening News Print. 40 p.

INDEX UNDER: Other - historical/ Franklin County

ABSTRACT: This article gives a history of Franklin County, Illinois and the development of the coal industry in that county. The effects of the coal mining industry on social and economic aspects of life in Franklin County are described.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1800's--1950's PERCENT COMPLETED: 100%

ACCURACY OF DATA: Source unknown

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: General for Franklin County, Illinois.

FORMAT OF DATA: News Print

155

Karr, J. R. 1968. Habitat and avian diversity on strip-mined land in east-central Illinois. Condor 70:348-357.

INDEX UNDER: Mine Land Reclamation & Utilization - wildlife/ Vermilion County

ABSTRACT: Bird populations were studied on four successional stages following strip-mining from bare-ground to bottomland forest. Quantitative data are presented to show the present development of vegetation on each study area. The rate of revegetation was affected by the amount of reclamation work completed after mining, in addition to time since mining.

Bird-species diversity increased throughout the strip-mined sere and was linearly correlated with foliage-height diversity and the logarithm of per cent vegetation cover. Analysis of relationships between energy requirements expressed as consuming biomass or as existence energy requirements indicated a linear relationship between these factors and habitat structure as measured by either foliage-height diversity or the logarithm of per cent vegetation cover. These data indicate that avian-species diversity and energy requirements of the avian population are related to habitat structure.

Greater avian diversity on strip-mined land when compared with other areas with similar vegetation is probably due to the presence of water, and to a lesser extent to the ridge-and-valley topography. Data presented here indicate that micro-spacial heterogeneity may account for a portion of the increased avian diversity in tropical areas.

Estimated daily existence requirements for bird populations varied from 1446 to 19,488 Kcal per day per 100 acres, and it is suggested that inclusion of energy requirements for all activities might double these figures. (author's summary)

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1966 PERCENT COMPLETE: 100%

ACCURACY OF DATA: On site observation; published data

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: Site specific for areas in east-central Illinois - Kickapoo State Park, Vermilion County.

FORMAT OF DATA: Published Article

156

Kinney, E. C. 1964. Extent of acid mine pollution in the United States affecting fish and wildlife. U. S. Dept. Interior, Fish and Wildlife Service, Circular 191. 27 p.

INDEX UNDER: Surface Water Impoundment/ Acid Mine Drainage/ Metal Pollution

ABSTRACT: The U.S. Department of the Interior requested that the Bureau of Sports Fisheries and Wildlife obtain data on the waters in the United States having potential for fish and wildlife habitat which are deleteriously affected by acid mine pollution. Reports were received from State Fish and Game Departments and pollution control agencies in 50 states. Thirty states reported that acid mine pollution was not a problem and had no data. Twenty states experienced acid mine pollution and sent the requested information including: name of watershed, name of river, stream or impoundment; type of coal or mineral involved; type of mining; length of polluted stream; surface acreage of impoundment; pH; total acidity; and potential for fish and wildlife if acid is reduced. It was reported that 5,890 miles of streams and 14,967 acres of impoundments in the United States have a potential for fish and wildlife habitat if the acid pollution is sufficiently reduced.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1962-1964 PERCENT COMPLETED: 100%

ACCURACY OF DATA: On site surveys by State Fish & Wildlife and Air Pollution Control personnel

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: Data recorded on streams and impoundments by county or river system in affected states including Illinois.

FORMAT OF DATA: Published Circular

157

Klassen, C. W. 1975. Discussion of mining - problems and policy alternatives
Proceedings Workshop on Non-Point Sources of Water Pollution, Illinois Institute for Environmental Quality, Document No. 75/16. p. 22-25.

INDEX UNDER: Erosion/ Acid Mine Drainage/ Other - coal economics

ABSTRACT: A general discussion of ambiguities associated with Public Law 92-500 concerning definition of non-point pollution is provided. Control of non-point pollution resulting from past mining activities is a problem of both the mining industry and the government (or the people) and may involve control of land utilization. A brief discussion of the economic impact of Illinois coal on Illinois and results (economically) of importing western coal is presented. The opinion is expressed that standards of non-point pollution as outlined in legislation are - - "not consistent with the criterion that such standards or regulations should be consistent with the environment."

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1809-1975 PERCENT COMPLETED: 100%

ACCURACY OF DATA: Publications of Ill. Coal Operators Assoc. and Public Law 92-500 Section 502(14).

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: General for Illinois; coal production by county for 10 major coal producing counties.

FORMAT OF DATA: Published Article

158

Klimstra, W. D. 1959. The potential of wildlife management on strip-mined areas. Illinois Wildlife 14(2):5-9.

INDEX UNDER: Mine Land Reclamation & Utilization - wildlife/ Perry County

ABSTRACT: This paper summarizes the potential of surface-mined areas for wildlife management. A succinct report of research on the Pyatts Research Area, Perry County, Illinois is provided. Topics covered include accessibility, spoil bank management and aquatic area management. The paper is concluded with a discussion of wildlife management practices, effect of location of areas, condition of areas following mining operations, money available for development of wildlife management areas, and availability of these areas to the public.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1950's--1959 PERCENT COMPLETED: 100%

ACCURACY OF DATA: On site investigation; published data

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: General for Illinois surface-mined areas; site specific for Pyatts Research Area, Perry County, Illinois.

FORMAT OF DATA: Published Article

159

Klimstra, W. D. 1959-61. Evaluation of habitat development on spoilbanks. Job Completion Reports. P-R Project W-64-R-1, 2, 3.

INDEX UNDER: Mine Land Reclamation & Utilization - wildlife, recreation/ Perry County

ABSTRACT: These reports summarize information relative to public accessibility, control of vegetation, and evaluation of responses of wildlife to various management techniques employed between 1954 and 1961 on the Pyatts Research Area, Perry County, Illinois. Public accessibility included road construction, spoilcrest and valley leveling, spot clearings, and pond access improvements. Control of vegetation included the use of liquid or pelleted herbicides, and manual clearing and brushing; effects of herbicides on wildlife were examined and discussed. Information relating to the responses of wildlife to management techniques was reported for most game and/or furbearing animals which occurred on the area.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1954-1961 PERCENT COMPLETED: 100%

ACCURACY OF DATA: On site inspection and experimentation

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: Specific for Pyatts Research Area, Perry County, Illinois.

FORMAT OF DATA: Final Report

160

Klimstra, W. D. 1962. Wildlife management and recreation on strip-mined areas. Outdoor Illinois 1(2):14-19.

INDEX UNDER: Mine Land Reclamation & Utilization - wildlife, agriculture, recreation/ Perry County

ABSTRACT: Potential utilization of surface-mined areas for recreation and wildlife management are discussed in this article. A succinct report of research conducted on the Pyatts Research Area in Perry County is provided. Topics covered include accessibility, spoil bank management and aquatic area management. The paper is concluded with a discussion of wildlife management practices, effect of location of areas to wildlife and recreational development, condition of areas after mining, money available for development of wildlife management or recreational areas, and availability of surface-mined areas to the public.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1954-1962 PERCENT COMPLETED: 100%

ACCURACY OF DATA: On site inspection; published articles

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: Site specific for Pyatts Research Area, Perry County, Illinois.

FORMAT OF DATA: Published Article

161

Klimstra, W. D. ca 1964. Pertinent literature. Coop. Wildl. Res. Lab., Southern Illinois University-Carbondale. Unpublished mimeograph. 10 p.

INDEX UNDER: Other - bibliography

ABSTRACT: This list contains 136 citations of literature published between 1925 and 1963 pertinent to surface mining. The citations are listed under subject categories of agriculture, ecology, fisheries, forestry, general, recreation, and wildlife.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1925-1963 PERCENT COMPLETED: N/A

ACCURACY OF DATA: List of Publications

QUANTITIES OF DATA: 136 citations

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: Papers included from Illinois and several other states.

FORMAT OF DATA: Mimeographed paper

162

Klimstra, W. D. 1967. Suggested criteria in preparation of regulations for recreational development of surface-mined areas. Coop. Wildl. Res. Lab., Southern Illinois University-Carbondale, 9 p.

INDEX UNDER: Mine Land Reclamation & Utilization - recreation

ABSTRACT: Recreational developments are considered in this report as three primary-use categories: general, fish and/or game, and special. Suggested criteria for each of these use categories were made for each of the following aspects: grading of displaced overburden, access, size and related factors, revegetation, and miscellaneous.

SUPPLEMENTARY INFORMATION

TIME PERIOD: N/A PERCENT COMPLETED: N/A

ACCURACY OF DATA: N/A

QUANTITIES OF DATA: N/A

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: General for Illinois.

FORMAT OF DATA: Typed Report

163

Klimstra, W. D., R. J. Haynes, and E. E. Filer. 1977. Resume of the utilization of nearly 200,000 acres of surface-mined land in Illinois. Proc. 32nd. Ann. Meet. Soil Conservation Soc. Am., Richmond, Va. p. 135-139.

INDEX UNDER: Mine Land Reclamation & Utilization - general, forestation, agriculture, pasture

ABSTRACT: In this resume of surface-mined land utilization in Illinois data are presented which reflect four periods: pre-law, 1962-1971, 1971-1975, 1975-1977. The periods reflect reclamation practice and land utilization as affected by significant changes in regulations pertaining to surface-mined land reclamation in Illinois. Data are presented as percent of surface-mined land reclaimed and utilized for forest, forage, rowcrop capability, recreation, roads, refuse, grain, and miscellaneous.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1866-1976 PERCENT COMPLETED: 100%

ACCURACY OF DATA: Published and unpublished reports

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: Specific for Illinois.

FORMAT OF DATA: Published Article

164

Klimstra, W. D., and S. R. Jewell. 1973. Stripmining: resources in conflict, impacts and reclamation efforts in Illinois. North American Wildlife and Natural Resources Conf. 38:121-132.

INDEX UNDER: Mine Land Reclamation & Utilization - general / Other-mining regulations

ABSTRACT: In this article the impact of surface mining in Illinois is pointed out; the interaction of research, legislation and reclamation practices, and the resulting condition and utilization of affected lands are discussed. A brief review of coal reserves in Illinois is provided. A discussion of surface mining and reclamation legislation in Illinois starts with the first unsuccessful attempt at regulating Illinois surface mining in 1929. Details of reclamation requirements under the Open Cut Reclamation Act of 1962, an amendment in 1968 (The Surface-Mined Land Reclamation Act) and The Surface-Mined Land Conservation and Reclamation Act of 1971 are presented. Research on Illinois lands surface-mined for coal concern natural revegetation, agronomic use, forestation, wildlife, recreation, soil parameters, effect of mining processes on resultant revegetation, and finally a survey of ownership, conditions, and use. Impact of legislation is addressed,and a decline in the number of coal companies, permits and active mines from 1962 to 1972 is discussed. Acreage affected by surface mining in Illinois is discussed in relation to the state in general, specific management regions (as described by Illinois Division of Land Reclamation), adverse conditions, and reclamation and utilization of pre- and post-law mined land. The paper is concluded with a discussion of areas that should be considered when planning utilization and reclamation of mined lands.

SUPPLEMENTARY INFORMATION

TIME PERIOD: to 1972 PERCENT COMPLETED: 100%

ACCURACY OF DATA: Published articles and records, on site studies

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: General for Illinois.

FORMAT OF DATA: Published Article

165

Klimstra, W. D., and J. L. Roseberry. 1963. The Perry County multiple use recreation area and strip mine rehabilitation - a pilot project. Coop. Wildl. Res. Lab., Southern Illinois University-Carbondale, 60 p.

INDEX UNDER: Mine Land Reclamation & Utilization - general/ Perry County

ABSTRACT: This paper provides development plans and cost estimates for the reclamation of a surface mined area for recreation. Included is an analysis of anticipated public use, revenues, and job creation. Plans for financing, promotion, programing of activities, cooperation of various agencies, and management and operation of the developed area are detailed.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1963-- PERCENT COMPLETED: 0%

ACCURACY OF DATA: On site study, investigation and reclamation

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: Site specific in Perry County, Illinois.

FORMAT OF DATA: Printed Report

166

Klimstra, W. D., and V. Terpening. 1974. Problem sites: surface-mined lands in Illinois. Coop. Wildl. Res. Lab., Southern Illinois University-Carbondale, 304 p.

INDEX UNDER: Mine Land Reclamation & Utilization - general/ Inventory Data - problem sites/ Surface Water Impoundments/ Acid Mine Drainage/ Refuse Dumps

ABSTRACT: This report identifies all problem sites associated with lands surface-mined for coal in Illinois. The sites were delineated during a 1970 to 1971 survey by the Coop. Wildl. Res. Lab., Southern Illinois University-Carbondale of Illinois lands surface-mined for coal. Each site was identified by exact location, size of affected area, owner, and company which mined the area. A description of each site includes acres associated with inactive tipples, uncovered gob and slurry, water or barren spoil banks. Physical and chemical factors associated with the problem sites are included. Map and photo references are provided for all problem sites. A general discussion of reclamation techniques that may be applicable to the problem sites is provided.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1970-1971 PERCENT COMPLETED: 100%

ACCURACY OF DATA: On site inspection, aerial photos, maps

QUANTITIES OF DATA: Data summation

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: General for Illinois; all sites' location and associated problems given.

FORMAT OF DATA: Published Report

167

Klimstra, W. D., P. A. Vohs, Jr., and J. D. Cherry. 1963. Strip-mined lands for recreation. Illinois Wildlife 18(4):6-8.

INDEX UNDER: Mine Land Reclamation & Utilization - recreation/ Perry County

ABSTRACT: This paper discusses the Pyatt Research Area as a reasonable representation of a surface mined area in southern Illinois which was evaluated for potential multiple use development and management. The area was surveyed to determine flora and fauna, public utilization of the area and the type of recreational developments that could be implemented in the area.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1954-1963 PERCENT COMPLETED: N/A

ACCURACY OF DATA: Previous research; literature; records of various private and state agencies; on site surveys

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: Site specific for Pyatts Stripland Research Area, Perry County, Illinois.

FORMAT OF DATA: Published Report

168

Kolar, C., and W. C. Ashby. 1978. Potential for woodland habitat from surface-mine tree plantings. Trans. 43rd N. Amer. Wildl. and Nat. Resour. Conf. 43:323-330.

INDEX UNDER: Mine Land Reclamation & Utilization - forestation/ Indiana

ABSTRACT: Results of a 1976 survey of approximately 30-year-old plantations on surface-mined land in Illinois and southern Indiana are provided. Information pertaining to 23 species including number of stands planted in, average diameter, age, percent survival, and pH of the stand containing the largest trees are presented.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1940's-1976 PERCENT COMPLETED: 100%

ACCURACY OF DATA: On site inspection; annual reports of Ill. Dept. Mines & Minerals

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: General presentation of data from plantations in Illinois and southern Indiana.

FORMAT OF DATA: Published Report

169

Kosowski, Z. V. 1973. Control of mine drainage from coal mine mineral wastes. Phase II -- Pollution abatement and monitoring. Environmental Protection Agency, Technological Series Report, EPA-R2-73-230. 83 p.

INDEX UNDER: Mine Land Reclamation & Utilization-revegetation/ Perry County/ Acid Mine Drainage/ Refuse Dumps

ABSTRACT: This report is the second and final report of two phases, and describes the implementation of specific pollution abatement measures for the entire demonstration site, a refuse pile at the New Kathleen Mine at DuQuoin, Illinois. In addition, details of the monitoring program designed to evaluate the effectiveness of the remedial measures chosen are included. Remedial measures include chemical stabilization and testing of experimental ground covers.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1968-1972 PERCENT COMPLETED: 100%

ACCURACY OF DATA: On site research

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: Site specific for New Kathleen Mine near DuQuoin, Illinois.

FORMAT OF DATA: Published Report

170

Krausz, N. G. P., and P. L. Duke. 1976. Legal aspects of coal leasing in Illinois. University of Illinois, Urbana, College of Agriculture Economic Extension Service Circular No. 1121, 9 p.

INDEX UNDER: Other - land leasing

ABSTRACT: Clauses typically contained in Illinois coal leases are presented and discussed in this circular.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1976 PERCENT COMPLETED: 100%

ACCURACY OF DATA: Source unknown

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: General for Illinois.

FORMAT OF DATA: Published Circular

171

Krohe, J., Jr. 1975. Midnight at noon. A history of coal mining in Sangamon county. Sangamon County Historical Society, Springifeld, Illinois. 49 p.

INDEX UNDER: Other - historical / Sangamon County

ABSTRACT: This report outlines the history of coal mining in Sangamon County, Illinois, from the first test drilling in the 1850's until the close of the last shipping mine in 1952. Maps outline the extent of underground mines in the county.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1850's-1952 PERCENT COMPLETED: 100%

ACCURACY OF DATA: Published reports and records; company records; Dept. Mines & Minerals reports

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: Specific for Sangamon County, Illinois; maps show extent of underground mines.

FORMAT OF DATA: Published Booklet

172

Larson, T. R. 1974. An in situ fertilization experiment of an alkaline strip-mine lake. Unpublished M.S. research report, Southern Illinois University, Carbondale. 51 pp.

INDEX UNDER: Mine Land Reclamation and Utilization - fisheries/ Jackson County / Surface Water Impoundments

ABSTRACT: This thesis summarizes the data collected during an in situ fertilization study of a surface-mine lake near DeSoto, Illinois. Polyethylene bags, suspended from a raft and open to the atmosphere, were utilized to establish control, phosphate fertilization, and nitrate plus phosphate fertilization experiments. Plankton counts, gross primary production, alkalinity, nitrate, silica, and water temperature data were collected for each experiment. Fertilization treatments demonstrated productivity values three to four times higher than the controls; nitrogen and phosphorus were limited during late summer in the lake. Enclosure in the bags resulted in depletion of bicarbonate supply, changes in the composition of plankton communities, and a reduction in gross primary productivity to one-half that of open water. (from summary)

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1973 PERCENT COMPLETED: 100%

ACCURACY OF DATA: On site experimentation; Laboratory analyses

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: Site specific for Moroni's Big Pit north of DeSoto, Jackson County, Illinois.

FORMAT OF DATA: M.S. Research Report

173

Leuthart, C. A. 1975. Reclamation of orphan strip mined land in southern Illinois and western Kentucky: a field study of the Palzo project of Williamson County, Illinois and the Clear Creek Swamp of Webster and Hopkins Counties, Kentucky. Ph.D. Dissertation, University of Louisville, Louisville, KY. 225 p.

INDEX UNDER: Acid Mine Drainage/ Metal Pollution/ Refuse Dumps/ Kentucky/ Williamson County

ABSTRACT: Two different inactive surface mine study areas were utilized. Differences in benthic fauna and ecosystems which develop in acid mine drainage and freshwater runoff areas are discussed.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1972-1975 PERCENT COMPLETED: 100%

ACCURACY OF DATA: Published data; on site research

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: Site specific for Palzo Project, Williamson County, Illinois and Clear Creek Swamp in Webster and Hopkins Counties, Kentucky.

FORMAT OF DATA: Ph.D. Dissertation

174

Lewis, W. M., and J. Nickum. 1964. Rearing trout in raceways supplied by water from the hypolimnion of a strip-mine pond. Prog. Fish Cult. 26:27-32.

INDEX UNDER: Surface Water Impoundments/ Mine Land Reclamation & Utilization - fisheries/ Perry, Jackson Counties

ABSTRACT: The proposed utilization of final cut ponds exhibiting seasonal thermal stratification as water sources for rearing of trout in raceways is discussed in this article. Chemical and physical characteristics of the water supply are presented and their effects upon the proposed utilization discussed.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1962-1963 PERCENT COMPLETED: 100%

ACCURACY OF DATA: On site collection and monitoring

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: Site specific for DeSoto area in Jackson County and Pyatts and DuQuoin area in Perry County, Illinois. Data by depth, month at DeSoto ponds.

FORMAT OF DATA: Published Article

175

Lewis, W. M., and C. Peters. 1955. Physico-chemical characteristics of ponds in the Pyatt, DeSoto, and Elkville strip mined areas of southern Illinois. Trans. Amer. Fish. Soc. 84:119-124.

INDEX UNDER: Surface Water Impoundments/ Perry, Jackson Counties

ABSTRACT: In this report, the physico-chemical characteristics of ponds of three surface-mined areas in southern Illinois were observed under both winter and summer conditions. In addition to a general discussion of the areas, a detailed discussion is provided concerning dissolved oxygen as associated with thermal stratification, pH, and specific conductance. Observations were also made concerning plant life and fishes of the ponds.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1953-1954 PERCENT COMPLETED: 100%

ACCURACY OF DATA: On site investigation; laboratory analyses

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: Site specific for surface mine lakes at Elkville, Pyatt, and DeSoto, Illinois

FORMAT OF DATA: Published Article

176

Lewis, W. M., and C. Peters. 1956. Coal mine slag drainage: toxicity to representative fishes. Industrial Wastes 1:145-147.

INDEX UNDER: Acid Mine Drainage/ Williamson County

ABSTRACT: Results of an investigation to establish the concentration of slag drainage necessary to produce fish mortality; to determine pH, acidity, and other parameters associated with lethal concentrations; and to establish lethal effects of the pollutant are provided in this paper. Pollutants collected from accumulated drainage at a mine in Williamson County were utilized for toxicity tests on green sunfish, largemouth bass, and carp. Findings indicated that the lethal effect of slag drainage resulted from free acid contained in the pollutant.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1955 PERCENT COMPLETED: 100%

ACCURACY OF DATA: On site collection; laboratory experimentation

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: Specific for materials collected in Williamson County, Illinois

FORMAT OF DATA: Published Article

177

Limstrom, G. A., and G. H. Deitschman. 1951. Reclaiming Illinois strip coal lands by forest planting. Univ. Illinois Agric. Exp. Sta. Bull. 547. p. 199-250.

INDEX UNDER: Highwalls/ Mine Land Reclamation & Utilization - forestation

ABSTRACT: This report outlines the character and extent of surface mined lands, site conditions in five surface-mining districts and forest planting possibilities, experiments, and recommendations for the state of Illinois. Eight conifers and ten hardwood species of trees are recommended as capable of making satisfactory growth under specified conditions on surface-mined land. Site qualities that largely determine species suitability for planting are character of overburden and method of mining, which affect the acidity and texture of the soil. Area of surface-mined land in Illinois is listed in an appendix by county, acidity, texture, vegetation character, and coal seam. Also description and chemical analysis of typical highwalls and surface spoils are listed for the five districts by county and coal seam.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1940's-1951 PERCENT COMPLETED: 100%

ACCURACY OF DATA: Recommendations based on data from reconnaissance of stripped lands; plantation surveys; experimental plantings.

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: General information covering the five surface mining districts in Illinois.

FORMAT OF DATA: Published Bulletin

178

Longsdorf, R., Jr. 1978. Backpack a stripmine - Illinois' Pyramid State Park. Wilderness Camping 8:28-30.

INDEX UNDER: Mine Land Reclamation & Utilization - recreation/ Perry County

ABSTRACT: This very colorful article portrays recreational facilities at Pyramid State Park, a surface-mined area in Perry County, Illinois which has been developed as a recreation and wildlife area.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1978 PERCENT COMPLETED: 100%

ACCURACY OF DATA: Site visit; state literature and leaflets

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: Site specific for Pyramid State Park, Perry County, Illinois.

FORMAT OF DATA: Magazine Article

179

Lucole, S. W., and C. H. Dowding. 1979. Statistical analysis of blast emission records from quarrying, mining and construction operations in the state of Illinois. Illinois Institute of Natural Resources. Doc. No. 79/02. 200 p.

INDEX UNDER: Other - noise pollution

ABSTRACT: This report describes characters of ground- and airborne-transmitted vibrations and sound impulses resulting from blasting. Data are summarized in 170 graphs and histograms which describe approximately 3,500 observations.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1976 PERCENT COMPLETED: 100%

ACCURACY OF DATA: Data from submitted county records; company reports

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: General for Illinois.

FORMAT OF DATA: Published Document

180

Martin, J. F. 1974. Quality of effluents from coal refuse piles. National Coal Association/Bituminous Coal Research, Inc., 1st Symp. Mine Preparation Plant Refuse Disposal. Preprints, Louisville, Ky., p. 26-37.

INDEX UNDER: Acid Mine Drainage/ Metal Pollution/ Refuse Dumps/ Pennsylvania, West Virginia, Kentucky, Indiana

ABSTRACT: This paper suggests that problems associated with coal waste disposal arise from the origin and character of the coal seam, the mining and processing methods utilized, the terrain at the disposal site, and construction controls applied. Silt, heavy metals, and acid constitute the major water pollution hazards of coal refuse. Data from analyses of effluents from refuse in Illinois are provided.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1974 PERCENT COMPLETED: 100%

ACCURACY OF DATA: Published records

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: Data from sites in Pennsylvania, West Virginia, Kentucky, Indiana, and Illinois.

FORMAT OF DATA: Published Article

181

McDonald, D. G., Sr. 1977. Chemical limnology of an acid mine drainage sludge settling impoundment. 7th Symp. Coal Mine Drainage, NCA/BCR Coal Conference & Expo IV, Louisville, Ky. Oct 19, 1979, 8 p.

INDEX UNDER: Surface Water Impoundments/ Acid Mine Drainage/ Williamson, Saline Counties

ABSTRACT: Limnological information concerning the sludge settling impoundment at the Will Scarlet Mine Treatment Plant is provided. Major emphasis is on the artificial maintenance of a meromictic condition by the input of effluent from the acid mine drainage neutralization plant.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1972 PERCENT COMPLETED: 100%

ACCURACY OF DATA: On site collection; laboratory analysis

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: Specific for Will Scarlet Mine in Williamson and Saline Counties, Illinois

FORMAT OF DATA: Published Presentation

182

McDonald, D. G., H. Yocum, and A. F. Grandt. 1974. Studies of lime-limestone treatment of acid mine drainage. 5th Symp. Coal Mine Drainage Research. NCA/BCR, Louisville, Ky. p. 229-245.

INDEX UNDER: Acid Mine Drainage/ Williamson, Saline Counties

ABSTRACT: With the treatment of over 1.5 billion gallons of plant influent over the past three years, effects of detention time, sludge recirculation, flow pattern and type of chemical have been observed using lime and limestone, separately and in combination, to various pH levels. During 56 days (1004 hours) of intensive research, data have been accumulated on highly acidic, Fe (III) acid mine drainage to determine the most economical method of treating large volumes of the same.

Evaluation of research has been accumulated as it relates to economics of treatments, chemistry of treatment and sludge characteristics.

Plant operation indicates that combination lime-limestone treatment in series flow with sludge recirculation on both treatment lines to be the mpst economical scheme of treatment.

Atomic absorption spectrophotometric studies indicate that lime treatment in series flow eliminated up to 85% of the metal cations in the plant influent. However, addition of less desirable species throughout the research period is well documented.

Sludge studies indicate limestone treatment to high pH levels yielded sludges with the highest solids content. However, sludges of slightly less solids were acquired during series flow treatment of similar AMD with lime and sludge recirculation. (author's abstract)

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1971-1974 PERCENT COMPLETED: On going

ACCURACY OF DATA: On site investigation

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: Site specific for Will Scarlet Mine in Williamson and Saline Counties, Illinois.

FORMAT OF DATA: Published Article

183

McDougall, W. B. 1918. Plant succession on an artificial bare area in Illinois. Trans. Sci. Ill. State Acad. Sci. 11:129-131.

INDEX UNDER: Mine Land Reclamation & Utilization - revegetation/ Vermilion County

ABSTRACT: A brief description of secondary plant succession toward a bottomland forest community is provided for areas surface-mined for coal near Danville, Illinois. Three study areas reflecting different ages of spoil following mining operations illustrated both hydrarch and xerarch secondary succession.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1917 PERCENT COMPLETED: 100%

ACCURACY OF DATA: On site inspection; company records

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: Site specific for areas in Vermilion County, Illinois.

FORMAT OF DATA: Published Article

ILLINOIS MINED LAND OSM BIBLIOGRAPHY

184

McDougall, W. B. 1925. Forests and soils of Vermilion County, Illinois, with special reference to the "striplands". Ecology 6:372-379.

INDEX UNDER: Mine Land Reclamation & Utilization - revegetation/ Vermilion County

ABSTRACT: A discussion of vegetational succession and soil development on surface-mined land in Vermilion County, Illinois is provided. Ecological factors and forest associations of the region are discussed. Bare areas created on bottomlands through surface mining for coal will, under favorable conditions, return to a bottomland forest association in approximately 24 years.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1919-1920's PERCENT COMPLETED: 100%

ACCURACY OF DATA: On site inspection; published data

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: Specific for Vermilion County, Illinois.

FORMAT OF DATA: Published Article

185

McGrath, J. 1969. Some aspects of soil nutrients in spoilbanks of a southern Illinois stripmine. Unpublished M.S. Research Report, Southern Illinois University-Carbondale, 82 p.

INDEX UNDER: Refuse Dumps/ Other - overburden properties/ Saline and Williamson Counties

ABSTRACT: This report provides detailed data on soil nutrients associated with spoilbanks and gob or refuse piles at the Will Scarlet Mine near Stonefort, Illinois. Results of the chemical analysis are provided and discussed with reference to age-class and depth of both shale and clay spoilbanks, and gob and slurry deposits. Results obtained were compared with agricultural ratings.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1967-1970 PERCENT COMPLETED: 100%

ACCURACY OF DATA: On site collection; Laboratory analyses

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: Specific for Will Scarlet Mine in Williamson and Saline Counties, Illinois.

FORMAT OF DATA: Unpublished M.S. Research Report

186

Medvick, C., and A. F. Grandt. 1976. Lime treatment experiments - Gob revegetation in Illinois. Illinois Mining Institute Proc. 1976, p. 48-62.

INDEX UNDER: Acid Mine Drainage/ Refuse Dumps/ Mine Land Reclamation & Utilization - revegetation/ Williamson, Henry, Fulton, Montgomery Counties

ABSTRACT: This paper describes a project through which the Illinois Department of Mines and Minerals, Division of Land Reclamation entered into a cooperative agreement with Peabody Coal Company to conduct experimentation with the objective of revegetating gob refuse areas, but with a short term aim of determining feasibility of lime application to neutralize acidic conditions so that vegetation could be established.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1971-1976 PERCENT COMPLETED: 100%

ACCURACY OF DATA: On site investigation

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: Specific mine sites in Illinois including Will Scarlet in Williamson County, Atkinson in Henry County, Middlegrove in Fulton County, and Crown in Montgomery County.

FORMAT OF DATA: Prepublication manuscript

187

Mercier, M. J. 1977. A chemical weathering study of overburden materials from three surface coal mines in southern Illinois and western Kentucky. M.S. Thesis, Southern Illinois University-Carbondale, 112 p.

INDEX UNDER: Acid Mine Drainage/ Other - soil development, overburden properties/ Williamson, Perry Counties/ Kentucky

ABSTRACT: This thesis reports data collected from artificial weathering of overburden samples and analysis of stream waters draining spoil piles from three surface mines in southern Illinois and western Kentucky. The study was conducted in an attempt to develop a prediction capability which would enable spoil materials to be tested for potential toxicity and acid production prior to mining.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1976-1977 PERCENT COMPLETED: 100%

ACCURACY OF DATA: Laboratory analyses of effluents from leaching columns; on site collection of stream samples

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: Site specific for mines in Williamson and Perry Counties, Illinois and Muhlenberg County, Kentucky.

FORMAT OF DATA: Unpublished M.S. Thesis

188

Miller, R. M., and R. E. Cameron. 1978. Microbial ecology studies at two coal mine refuse sites in Illinois. Argonne National Laboratory, Land Reclamation Program. ANL/LRP-3. 41 p.

INDEX UNDER: Refuse Dumps/ Mine Land Reclamation & Utilization - general/ Macoupin County

ABSTRACT: Results of an investigation of the microflora associated with coal refuse at the Staunton Refuse Reclamation Site and the Little Dog Mine in Macoupin County are provided. Information was gathered for both edaphic and biotic composition of the refuse material. Emphasis was placed on heterotrophic and autotrophic components. Presence of chemolithotrophs was investigated. Relationship between bacteria, fungi, and algae is discussed. Information presented in this report can be utilized to assess trends and changes in microbial numbers and composition related to manipulations of the edaphic and biotic ecosystem components associated with reclamation of refuse.
(modified from author's abstract)

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1977-1978 PERCENT COMPLETED: 100%

ACCURACY OF DATA: On site research

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy - $5.25 (N.T.I.S.)

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: Specific for sites in Macoupin County, Illinois.

FORMAT OF DATA: Published Report

189

Moss & Johnson Association, Springfield. 1978. Abandoned mine lands reclamation council project 76-03. The Nokomis - Coalton site, Montgomery County, Illinois. A demonstration reclamation project. Illinois Abandoned Mined Land Reclamation Council, Department Mines & Minerals. 38 p.

INDEX UNDER: Refuse Dumps/ Montgomery County

ABSTRACT: This report discusses the decisions leading up to the type of development designed for the reclamation of the Reliance Mine Site area, the construction operations, data collection during the construction and recommendations for the future.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1976-1977 PERCENT COMPLETED: 100%

ACCURACY OF DATA: On site data collection

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: Site specific for Reliance Mine in Coalton, Illinois.

FORMAT OF DATA: Published Report

190

Myers, C. W., and W. D. Klimstra. 1963. Amphibians and reptiles of an ecologically disturbed (strip-mined) area in southern Illinois. Amer. Midl. Nat. 70(1):126-132.

INDEX UNDER: Mine Land Reclamation & Utilization - wildlife/ Perry County

ABSTRACT: During a survey of the herpetofauna of the Pyatts Stripland Research Area, a total of 24 species were reported from the surface-mined lands. Ecological factors affecting invasion of mined lands by amphibians and reptiles are discussed.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1960-1961 PERCENT COMPLETED: 100%

ACCURACY OF DATA: On site inspection

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: Specific for Pyatts Research Area, Perry County, Illinois.

FORMAT OF DATA: Published Article

191

Nawrot, J. R., R. J. Haynes, P. L. Pursell. J. R. D'Antuono, R. L. Sullivan, and W. D. Klimstra. 1977. Illinois lands affected by undergound mining for coal. Cooperative Wildlife Research Laboratory, Southern Illinois University-Carbondale; Illinois Institute for Environmental Quality, Document No. 77/11. 195 p.

INDEX UNDER: Mine-Refuse Fires/ Open Entrances/ Erosion/ Surface Water Impoundments/ Acid Mine Drainage/ Metal Pollution/ Refuse Dumps

ABSTRACT: The Cooperative Wildlife Research Laboratory of Southern Illinois University at Carbondale surveyed all lands affected by underground mining for coal as of 1 September 1976. The survey delineated location, surface ownership, and environmental problems associated with abandoned mine sites.

Historical and governmental records provided locations for 4,076 abandoned mines in 70 counties. Of the 4,076 abandoned mines recorded, 1,745 no longer existed due to other developments; 1,361 sites had reverted to a natural condition with little or no evidence of past mining activities; and 711 abandoned mine sites revealed evidence of past mining. Affected acreage associated with 700 abandoned sites included 3,943.5 acres of gob refuse, 693.8 acres of slurry refuse, 813.2 acres of tipple areas, 647.7 acres of water impoundments, and 857.7 acres of off-site affected areas. Analysis of samples collected from waters on and adjacent to preparation sites indicated that water of poor quality was polluting Illinois waters and terrestrial areas. Identification of 24 active underground mines was reported. (from abstract)

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1975-1976 PERCENT COMPLETED: 100%

ACCURACY OF DATA: Historical and governmental records; aerial photos; maps; on site surveys

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: Data is site specific by county for all underground mine sites in Illinois.

FORMAT OF DATA: Published Report

192

Nawrot, J. R., and W. D. Klimstra. 1977. Illinois' mined land inventories: their implementation and utilization. 5th Symp. on Surface Mining and Reclamation. NCA/BCR Coal Conf. and Expo IV. Louisville, Ky. p. 54-60.

INDEX UNDER: Open Entrances/ Surface Water Impoundments/ Acid Mine Drainage/ Metal Pollution/ Refuse Dumps/ Mine Land Reclamation & Utilization - general/ Inventory Data - mined land surveys

ABSTRACT: This report describes the implementation and utilization of mined land inventories in Illinois. The Cooperative Wildlife Research Laboratory of Southern Illinois University at Carbondale conducted extensive state-wide surveys of the status and quality of Illinois surface-mined lands and of underground coal mining in Illinois in 1970 and 1975, respectively. Objectives of the surveys were: 1) to locate, determine size, and estimate status of affected acreages; 2) describe the affected acreage including such aspects as physical, vegetational, and chemical characteristics of spoilbank, gob, slurry, tipple, and water areas; 3) identify current utilization, reclamation effort, and/or natural revegetation; 4) define location and extent of problem areas; and 5) establish bibliographic data for affected acreages. Records, aerial photos, and maps supplied by various state agencies were used to locate affected areas; survey forms were completed during on-site inspections. Data from both surveys were transferred from field data forms and laboratory analysis sheets to optical scanner sheets using coded variables and then from the scanner sheets onto computer tapes for storage and subsequent analysis. The inventories provide extensive baseline data available for appraisal of effectiveness of state regulations for ensuring quality environments during and after mining; permit development of statewide coordinated planning to accommodate problems created by the mining of coal; provide necessary information for planning by state, regional, county, and city governments for problem site resolution and future land use practices; and allows for coordination between political subdivisions in reclamation planning providing for community, regional and state-wide needs and concerns. Illinois is unique in having completed detailed analysis of all lands and water affected by both surface and deep mining. (from text)

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1970-1977 PERCENT COMPLETED: 100%

ACCURACY OF DATA: Maps; aerial photos; records of Department of Mines and Minerals; on site inspection

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: Specific for Illinois.

FORMAT OF DATA: Published Article; Inventory Data on Computer Tapes

193

Nawrot, J. R., P. L. Pursell, W. D. Klimstra, and B. N. Jacobson. 1977. Problem sites: lands affected by underground mining for coal in Illinois. Illinois Institute for Environmental Quality, Document No. 77/38. 556 p.

INDEX UNDER: Open Entrances/ Erosion/ Acid Mine Drainage/ Refuse Dumps/ Inventory Data - problem sites

ABSTRACT: Following a statewide survey of all Illinois land affected by underground mining for coal, the Cooperative Wildlife Research Laboratory of Southern Illinois University at Carbondale identified problem areas associated with abandoned underground mine sites. Based upon an evaluation of the extent and severity of adverse environmental parameters, approximately 5,000 acres representing 508 mine sites located in 50 counties were identified as problem areas. These areas represented one or more of the following conditions; 1) exposed refuse materials, 2) abandoned tipple areas, 3) polluted water impoundments, 4) adjacent affected terrestrial areas, 5) mine drainage to adjacent ditches, streams, and/or rivers, and 6) potentially hazardous mine openings including openings with mine drainage.

Deeply eroded, barren or sparsely vegetated refuse areas, as well as potentially hazardous or flowing mine openings characterized the most severe problem conditions. Problem areas ranged in size from 0.1 to 206.2 acres; however, 43 percent of the sites were less than 2.0 acres. Eight southern counties accounted for more than two-thirds of the state's total problem acreage.

In addition to physical and vegetational descriptions, analysis of refuse samples as well as drainage samples were included with individual mine site descriptions. An objective ranking system of problem sites based upon the extent and severity of individual problem conditions was also included.

Some reclamation approaches are discussed for the various problem conditions of exposed gob and slurry refuse, abandoned tipple areas, adjacent affected terrestrial and aquatic areas, and potentially hazardous or pollutional mine openings. Each problem site will require a detailed appraisal of its associated problem conditions, environmental impacts and reclamation costs before recommending and implementing a reclamation plan. (author's abstract)

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1975-1977 PERCENT COMPLETED: 100%

ACCURACY OF DATA: On site inspection; laboratory analyses; aerial photos; maps

QUANTITIES OF DATA: 508 site descriptions

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: Specific for 508 mine sites in Illinois.

FORMAT OF DATA: Published Document

194

Newton, S. H. 1974. Evaluation of raceway systems for the production of channel catfish (Ictalurus punctatus) fingerlings. Ph.D. Dissertation, Southern Illinois University-Carbondale. 82 p.

INDEX UNDER: Surface Water Impoundments/ Mine Land Reclamation & Utilization - fisheries/ Jackson County

ABSTRACT: Results of an evaluation of the raceway system as a method for high-density production of channel catfish fingerlings are presented in this thesis. Evaluation of three different systems which utilized water from deep wells or from surface mine impoundments was completed. Results indicated that production of catfish fingerlings in raceways was feasible only by using a pond to raceway transfer method.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1969-1972 PERCENT COMPLETED: 100%

ACCURACY OF DATA: On site experimentation and evaluation; published data.

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: Specific for sites at Fountain Bluff Farm at Gorham and Moroni Farms at DeSoto, Jackson County, Illinois.

FORMAT OF DATA: Ph.D. Dissertation

195

Ostendorf, D. L., and J. E. Gibson. 1976. Illinois land, the emerging conflict over the use of land for agricultural production and coal development. The Illinois South Project, Inc., 37 p.

INDEX UNDER: Mine Land Reclamation & Utilization - agriculture

ABSTRACT: This report reviews facts pertinent to the development of coal mining and its potential conflict with the agricultural interests of Illinois. The continual loss of Illinois agricultural lands and the increasing need for food in the world are pointed out. The authors suggest that 52 counties be designated as "Restricted Development Counties" in which new coal mines and/or coal conversion plants would be prohibited from locations in prime agricultural lands; and that any county with 75% or more of its area identified as prime agricultural land be designated as an "Energy Development Moratorium County" where no new coal industry development would be allowed.

SUPPLEMENTARY INFORMATION

TIME PERIOD: to 1975 PERCENT COMPLETED: 100%

ACCURACY OF DATA: Published and unpublished articles and reports from various agencies in Illinois and the United States

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: General for Illinois; some information by county and/or coal mine.

FORMAT OF DATA: Published Report

196

Paone, J., J. L. Morning, and L. Giorgetti. 1974. Land utilization and reclamation in the mining industry, 1930-1971. U.S. Dept. Interior. U.S. Bureau of Mines Information Circular 8642. 61 p.

INDEX UNDER: Subsidence and Slumping/ Refuse Dumps/ Mine Land Reclamation & Utilization - general

ABSTRACT: This report includes data on land use for wastes from underground and surface mining, for wastes from mill operations, and on subsidence. Data on land use and reclamation were obtained from operating companies, mining organizations, appropriate state agencies, and others concerned with such activities.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1930-1971 PERCENT COMPLETED: 100%

ACCURACY OF DATA: Published literature; industry-wide survey

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy - $1.05 (G.P.O.)

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: General data on land use for waste from underground and surface mining from affected states.

FORMAT OF DATA: Published Report

197

Parsons, J. D. 1957. Literature pertaining to formation of acid-mine wastes and their effects on the chemistry and fauna of streams. Ill. Acad. Sci. Trans. 50:49-59.

INDEX UNDER: Acid Mine Drainage/ Other - literature review

ABSTRACT: This article presents a review of 117 different sources of literature on acid-mine waste formation and their affect on the chemistry and fauna of freshwater streams.

SUPPLEMENTARY INFORMATION

TIME PERIOD: to 1956 PERCENT COMPLETED: 100%

ACCURACY OF DATA: Review of published literature

QUANTITIES OF DATA: 117 papers reviewed

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: General for United States and other areas of the world.

FORMAT OF DATA: Published Article

198

Pendleton, J. W., and J. J. Hammond. 1964. Reclaiming strip-mined land. Illinois Research 6(3):10-11

INDEX UNDER: Mine Land Reclamation & Utilization - agriculture/ Fulton County

ABSTRACT: This paper provides brief descriptions of on going studies to delineate environmental factors which prevent the rapid return to a profitable and diverse agricultural productivity on lands surface-mined for coal.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1963-1964 PERCENT COMPLETED: On going

ACCURACY OF DATA: On site investigation

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: Data specific for site in Fulton County, Illinois.

FORMAT OF DATA: Published Report

199

Perkins, H. E. 1955. A study of the toxicity of polluted water draining from mine-wastes of southern Illinois. Unpublished M.S. Research Report, Southern Illinois University, Carbondale, 9 p.

INDEX UNDER: Acid Mine Drainage/ Mine Land Reclamation & Utilization - fisheries

ABSTRACT: Results of experiments to determine dosage required to kill select species of fishes and manner of death are provided. Lethal dosage for most species appeared to be a concentration of 1 part pollutant to 142 parts water. A precipitate on the gill filaments was suspected as the cause of death of all species of fish. (from author's discussion)

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1955 PERCENT COMPLETED: 100%

ACCURACY OF DATA: On site collection; laboratory experimentation

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: Site specific for DeSoto surface mines, Jackson County, Illinois.

FORMAT OF DATA: Unpublished M.S. Research Report

200

Peterson, J. R., and J. Gschwind. 1972. Leachate quality from acidic mine spoil fertilized with liquid digested sewage sludge. J. Environ. Quality 1(4):410-412.

INDEX UNDER: Acid Mine Drainage/ Metal Pollution/ Mine Land Reclamation & Utilization - sewage sludge/ Williamson County

ABSTRACT: This report summarizes data collected from leachate quality analysis of acidic surface mine spoils collected in Williamson County, Illinois. Spoils were fertilized by mixing with 61 and 122 metric tons/ha, dry weight, digested sewage sludge. A third experiment utilized 61 metric tons/ha of sewage sludge applied only to the surface layer of the spoil material. Mixing of 61 metric tons/ha sludge with spoil material resulted in the most efficient water amelioration. Amelioration effects were due to, and restricted to, the sludge treated layer. Incorporation of sewage sludge throughout the root zone may be necessary for the successful establishment of plants on acidic spoils.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1972 PERCENT COMPLETED: 100%

ACCURACY OF DATA: On site collection; laboratory experimentation and analyses.

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: Specific for sites in Williamson County, Illinois.

FORMAT OF DATA: Published Article

201

Phelps, E. R. 1976. Facts and myths in respect to the controversy between underground and surface mining in Illinois and the United States. Illinois Coal, Proceedings of the 4th Annual Illinois Energy Conference. p. 36-40.

INDEX UNDER: Mine Land Reclamation & Utilization - general

ABSTRACT: The author presents information pertaining to coal production and costs for surface and underground mining of coal. Cost of reclamation and increase due to regulations is discussed. Economics of coal transportation and utilization for electrical production and the need for a sound energy policy are pointed out.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1976 PERCENT COMPLETED: N/A

ACCURACY OF DATA: Source unknown; a few reports mentioned but not cited.

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: General for Illinois and the United States

FORMAT OF DATA: Published Paper

202

Pietz, R. I., J. R. Peterson, and C. Lue-Hing. 1974. Groundwater quality at a strip-mine reclamation area in west central Illinois. Research and Applied Technology Symp. on Mined-Land Reclamation, 2:124-144.

INDEX UNDER: Acid Mine Drainage/ Metal Pollution/ Mine Land Reclamation & Utilization - sewage sludge/ Fulton County

ABSTRACT: Baseline data on groundwater quality from surface-mined and undisturbed lands were gathered by analysis of samples collected from monitoring wells. Groundwater quality was significantly affected by former surface mining operations for coal in the mine-spoil area. Trace metals, Cd, Cr, Ni, Pb, and Zn concentrations were higher in mine-spoil areas than in unmined areas. Greater significant monthly, seasonal, and well variations for the 23 chemical characteristics examined were associated with mined areas than with unmined areas. Crushing of shale, and other overburden materials and their incorporation in or near the water table during mining operations significantly affected groundwater quality by altering chemical-physical composition of the soil and geologic profiles. (adapted from author's abstract)

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1971-1973 PERCENT COMPLETED: 100%

ACCURACY OF DATA: On site collection; laboratory analyses

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: Specific for Fulton County, Illinois; data in tabular form.

FORMAT OF DATA: Published article

203

Ralston, D. S. 1979. Equipment considerations for restoring prime farmland. Amax Coal Company; and Argonne National Laboaratory, Land Reclamation Program. 14 p.

INDEX UNDER: Mine Land Reclamation & Utilization - rowcrop, agriculture/ Other - equipment/ Fulton, Williamson, Saline, Perry, Jackson Counties / Indiana

ABSTRACT: A discussion of surface mining equipment necessary for reclamation for row-crop agricultural production under the new federal surface mining regulations is presented. Information on corn and soybean yields from reclaimed surface-mined lands is provided in histograms for several counties in Illinois.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1978-1979 PERCENT COMPLETED: On going

ACCURACY OF DATA: On site inspection; company records

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: General for Indiana and Illinois; specific data for sites in Fulton, Williamson, Saline, Perry, and Jackson Counties in Illinois

FORMAT OF DATA: Copy of Presented Paper

204

Ramsey, J. P. 1970. Control of acid pollution from coal refuse piles and slurry lagoons. Symp. on Coal Mine Drainage Research, 3:138-144.

INDEX UNDER: Erosion/ Acid Mine Drainage/ Refuse Dumps/ Mine Land Reclamation & Utilization - general/ Perry County

ABSTRACT: Early phases of a project to demonstrate effective and practical means of controlling acid formation from coal refuse piles and slurry lagoons at the New Kathleen Mine near DuQuoin, Illinois are presented in this paper. Reshaping of refuse piles to accommodate quality data on water flow, establishment of experimental and control plots, and installation of an irrigation system and water sampling facilities are discussed. Plans for future sampling and control of water drainage from slurry lagoons are presented.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1968-1970 PERCENT COMPLETED: On going

ACCURACY OF DATA: On site experimentation

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: Site specific for New Kathleen Mine near DuQuoin, Illinois.

FORMAT OF DATA: Published Article

205

Reinertsen, D. L. 1964. Strippable coal reserves of Illinois. Part 4 - Adams, Brown, Calhoun, Hancock, McDonough, Pike, Schuyler, and the southern parts of Henderson and Warren Counties. Ill. State Geological Survey Circular 374. 32 p.

INDEX UNDER: Inventory Data - coal reserves/ Adams, Brown, Calhoun, Hancock, McDonough, Pike, Schuyler, Henderson, Warren Counties

ABSTRACT: This report describes and evaluates the strippable coal reserves in Adams, Brown, Calhoun, Hancock, McDonough, Pike, and Schuyler Counties and the southern parts of Henderson and Warren Counties. These counties lie between the Illinois and Mississippi Rivers and have water transportation accessible to the coal mining industry. Data used in estimating strippable coal reserves in the Colchester (No. 2) and the Springfield (No. 5) coals are shown on maps drawn to the scale of one-half inch to the mile. Maps show outcrops, mined-out areas, structure contours, and thickness of coal. Overburden thickness is divided and shown by isopath lines. Tonnage estimates, tabulated by township and county, are based on coal thickness classes for each overburden thickness and reliability of estimate category. Primary and secondary reliability categories are used. Stratigraphic relations of the Pennsylvanian strata in the region are shown on two north-south section diagrams. Other coals in the region are described but no estimates of reserves are given. (from abstract)

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1964 PERCENT COMPLETED: 100%

ACCURACY OF DATA: Published reports; unpublished data for test wells, out crop
mines

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: Data specific for counties
list; data supplied by township and county; based on coal thickness.

FORMAT OF DATA: Published Circular

206

Roman, G. H. 1968. United Electric's new wheel moves 1,250,000 cu yd per month. Coal Age 73(3):62-69.

INDEX UNDER: Other - equipment/ Perry County

ABSTRACT: This article describes equipment and operation of equipment used at United Electric Coal Companies' Fidelity Mine near DuQuoin, Illinois. The wheel excavator is the primary emphasis of the discussion.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1968 PERCENT COMPLETED: 100%

ACCURACY OF DATA: Company records

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: Site specific for Fidelity Mine near DuQuoin, Illinois

FORMAT OF DATA: Published Article

207

Roseberry, J. L. 1963. Report on a survey of potential recreational utilization of Illinois strip-mined lands. Mid-west Coal Producers Institute, Inc., 11 p.

INDEX UNDER: Mine Land Reclamation & Utilization - recreation/ Inventory Data - mined land use

ABSTRACT: This publication represents a portion of the final project report involving the investigation of potential recreational utilization of Illinois surface-mined lands, and contains information concerning ownership, availability, suitability, and location of individual tracts of surface-mined land.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1961-1962 PERCENT COMPLETED: 100%

ACCURACY OF DATA: On site inspection; records and reports of Mid-West Coal Producers Assoc.

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: Data by county and/or district in Illinois.

FORMAT OF DATA: Published Article

208

Roseberry, J. L., and W. D. Klimstra. 1963. Re-establishment of fauna and flora on spoilbanks resulting from wheel and shovel excavators: a comparative analysis. Job Completion Report, P-R Project W-64.R-5, 35 p.

INDEX UNDER: Mine Land Reclamation & Utilization - wildlife, revegetation/ Other - equipment/ Perry County

ABSTRACT: A comparison of wildlife habitat development on surface mine spoils resulting from shovel and wheel excavators is provided in this report. The flora, fauna, soil fertility and moisture content, and topography of spoils from one to five years after mining were examined on the two spoil types. Small areas of leveled spoils were also compared for the two mining methods. Photographs of equipment and resulting spoils are provided in the report.

SUPPLEMENTARY INFORMATION

TIME PERIOD: ca 1963 PERCENT COMPLETED: 100%

ACCURACY OF DATA: On site inspection and evaluation; company records.

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: Data specific for mines in Perry County Illinois.

FORMAT OF DATA: Final Report

209

Roseberry, J. L., and W. D. Klimstra. 1964. Recreational activities on Illinois strip-mined lands. J. Soil and Water Conservation, 19(3): 107-110.

INDEX UNDER: Mine Land Reclamation & Utilization - recreation/ Inventory Data - mined land use

ABSTRACT: This report details the current use of the more than 108,000 acres of surface-mined land in Illinois, and describes the recreational use now being made of mined areas.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1963 PERCENT COMPLETED: 100%

ACCURACY OF DATA: On site inspection; company and governmental agencies' records.

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: General information from Illinois; some site specific data.

FORMAT OF DATA: Published Article

210

Rossin, A. D., R. E. Zimmerman, and R. P. Carter. 1972. Strip mine land reclamation planning project. Argonne National Laboratory, Center for Environmental Studies. 60 p.

INDEX UNDER: Erosion/ Acid Mine Drainage/ Metal Pollution/ Refuse Dumps

ABSTRACT: The objective of this project was to develop a long range plan for reclamation of pre-law surface mine land in Illinois. This report presents the tasks to be performed, the project plan, the task force participants, and a set of trip reports documenting preliminary visits by the project team. A series of summary sheets are provided on sites that have been suggested for consideration as possible demonstration projects.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1972- PERCENT COMPLETED: On going

ACCURACY OF DATA: On site inspection and data collection

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: Site specific areas recommended for possible reclamation.

FORMAT OF DATA: Published Report

211

Rosso, W. A. 1975. The ecology of the South Fork of the Saline River as affected by surface mine wastes. Ph. D. Dissertation, Southern Illinois University-Carbondale. 134 p.

INDEX UNDER: Acid Mine Drainage/ Metal Pollution/ Refuse Dumps/ Saline, Williamson Counties

ABSTRACT: A section of the South Fork of the Saline River was selected to assess the impact of surface mining practices on aquatic ecosystems by examining the chemical and biotic components of the aquatic system. Major inputs of acid mine drainage resulted in a lowering of pH and an increase in acidity, sulfate, iron, and manganese. Acid mine drainage sufficient to destroy the buffering capacity of the stream resulted in a great reduction of number and species of organisms. Minor amounts of acid mine drainage had no discernible effect on stream populations, although there was a tendency to depress pH and increase sulfate and manganese. (from summary)

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1968-1971 PERCENT COMPLETED: 100%

ACCURACY OF DATA: On site investigation

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: Area specific - South Fork of Saline River in Williamson and Saline Counties, Illinois.

FORMAT OF DATA: Ph. D. Dissertation

212

Sall, G. W. 1954. Strip land reclamation at Little Sister. Mining Congress J. 40(10):26-28.

INDEX UNDER: Mine Land Reclamation & Utilization - wildlife, pasture/ Fulton County

ABSTRACT: This article reviews the history of the Little Siter Mine in Fulton County and discusses reclamation techniques utilized on the surface-mined lands. Grading was part of the mining operation in 1954.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1944-1954 PERCENT COMPLETED: 100%

ACCURACY OF DATA: Source unknown

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: Site specific for Little Sister Mine in Fulton County, Illinois.

FORMAT OF DATA: Published Article

213

Sandusky, J. E. 1978. The potential for management of waterfowl nesting habitat on reclaimed mined land. Proceeding Symposium, Surface Mining and Fish/Wildlife Needs in the Eastern United States. Dec. 3-6, Morgantown, W. Va. p. 325-327.

INDEX UNDER: Surface Water Impoundments/ Mine Land Reclamation & Utilization - wildlife/ Williamson, Saline Counties

ABSTRACT: Mining and reclamation of 291 hectares of land by the Peabody Coal Company at the Will Scarlet Mine, Williamson County, Illinois is discussed. Results of breeding pair censuses, general habitat surveys and waterfowl nest surveys are presented and briefly discussed. Broods of mallards (*Anas p. platyrhynchos*), wood ducks (*Aix sponsa*), and blue-winged teal (*Anas discors*) were successfully reared on the reclaimed area.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1977 PERCENT COMPLETED: On going

ACCURACY OF DATA: On site investigation

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: Site specific for Will Scarlet Mine in Williamson and Saline Counties, Illinois

FORMAT OF DATA: Published Article

214

Scalet, C. G. 1966. Supplementary feeding of the black bullhead and green sunfish in strip-mine ponds. Unpublished M.A. Thesis, Southern Illinois University - Carbondale, 28 p.

INDEX UNDER: Surface Water Impoundments/ Mine Land Reclamation & Utilization - fisheries/ Jackson County

ABSTRACT: This thesis reports on the use of strip-mine ponds to produce black bullheads (Ictalurus melas) and green sunfish (Lepomis cyonellus) for recreational purposes. Bullheads of recreational size (0.71 pounds) were produced, with supplementary feeding, in one summer. Green sunfish did not show enough growth in one summer to be acceptable for feeding-out in surface-mine ponds. A good food conversion was obtained with commercial trout pellets. Survival, stocking rates and density control by largemouth bass (Micropterus salmoides) are discussed.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1966 PERCENT COMPLETED: 100%

ACCURACY OF DATA: On site investigations

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: Site specific for ponds north of DeSoto, Illinois

FORMAT OF DATA: M.A. Thesis

215

Schaviljie, J. P. 1941. Reclaiming Illinois strip-mined coal lands with trees. J. Forestry 39:714-719.

INDEX UNDER: Mine Land Reclamation & Utilization - forestation

ABSTRACT: This article describes the early use of reforestation of surface-mined lands in Illinois. Survival of several species on mined land are discussed and a map showing location of major surface mines in Illinois as of 1940 is provided.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1920-1940 PERCENT COMPLETED: 100%

ACCURACY OF DATA: Published data

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: General for Illinois

FORMAT OF DATA: Published Article

216

Schechtman, M. E. 1976. Social impacts of coal development: who pays, who profits? In: Illinois Coal; Proceedings of the 4th Annual Illinois Energy Conf. p. 264-270.

INDEX UNDER: Other - coal economics

ABSTRACT: This paper reviews some of the social impacts of coal development in Illinois. In general, most adverse economic and social impacts occur in coal producing counties and communities while most economic and social benefits are siphoned off to great commercial and banking centers. (from text)

SUPPLEMENTARY INFORMATION

TIME PERIOD: N/A PERCENT COMPLETED: 100%

ACCURACY OF DATA: Newspaper articles; published records

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: General for Illinois.

FORMAT OF DATA: Published Article

217

Schleuger, R. L. 1975. Mining - problems and policy alternatives. Proceedings Workshop on Non-Point Sources of Water Pollution; Illinois Institute Environmental Quality, Document No. 75-16, p. 20-22.

INDEX UNDER: Acid Mine Drainage/ Metal Pollution/ Refuse Dumps/ Mine Land Reclamation & Utilization - general

ABSTRACT: A general review of pollution resulting from mining activities is presented. Sources of pollution described include refuse piles, slurry lagoons, and exposed spoil banks. Acid mine drainage; chemical pollution including iron, manganese, aluminum, and sulfates of calcium and magnesium; and sedimentation are the major pollutants resulting from mining operations. Total coal production and resultant miles of streams adversely affected by coal mine-related pollution are presented. The future role of coal as a source of energy in the United States is addressed. Overall goals and objectives of a coal mine wastes program in Illinois are the prevention of additional water-quality deterioration by preventing new pollution through enforcement of laws and regulations and by water-quality rehabilitation through development of a plan leading to the restoration of abandoned mined lands.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1974 PERCENT COMPLETED: 100%

ACCURACY OF DATA: Records of Department of Mines and Minerals

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: General for Illinois; information on stream pollution provided by stream and county.

FORMAT OF DATA: Published Article

218

Searight, T. K., and W. H. Smith. 1969. Strippable coal reserves of Illinois, Part 5B - Mercer, Rock Island, Warren, and parts of Henderson and Henry Counties. Ill. State Geological Survey Circular 439, 22 p.

INDEX UNDER: Inventory Data - coal reserves/ Mercer, Rock Island, Warren, Henderson, Henry Counties

ABSTRACT: This report describes and evaluates coal reserves of the Rock Island (No. 1) coal in Mercer, Rock Island, Warren, and parts of Henderson and Henry Counties. A map scaled one-half inch to the mile shows the boundary of Pennsylvanian strata, outcrop of the Rock Island (No. 1) coal member, outcrop of the No. 2 coal, coal thicknesses, overburden limit of 150 feet, and mined-out area. Stratigraphic relations of coal deposits in the area are shown on a series of north-south and east-west cross sections. Tonnage estimates, based on average coal thickness were made when sufficient data were available. (from abstract)

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1969 PERCENT COMPLETED: 100%

ACCURACY OF DATA: Published records; drill well records; company records

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: Specific for counties listed; data by township, county, and coal seam.

FORMAT OF DATA: Published Circular

219

Seastrom, P. N. ca 1942. Planting suggestions for stip mines in southern Illinois. Strip Mine Planting School - Illinois Division of Forestry District # 1, 23 p.

INDEX UNDER: Mine Land Reclamation & Utilization - forestation

ABSTRACT: This paper gives a brief summary of tree plantings on surface-mined lands in southern Illinois during 1938 to 1942. Requirements of various tree species planted on mine lands are provided in tables. A detailed summation of planting procedures and recommendations for fire protection, rodent and insect control, timber stand improvement, and record keeping are discussed.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1942 PERCENT COMPLETED: N/A

ACCURACY OF DATA: Acquired from past planting records

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: General for southern Illin

FORMAT OF DATA: Mimeograph Paper

220

Seastrom, P. N. 1963. United Electric Coal Companies land-use program. Mining Congress J. 49(12):26-28.

INDEX UNDER: Mine Land Reclamation & Utilization - general, pasture, orchards, forestation/ Perry County

ABSTRACT: This paper describes land management techniques utilized by United Electric Coal Companies in reclamation projects which were identified as being voluntary and economically worthwhile.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1963 PERCENT COMPLETED: N/A

ACCURACY OF DATA: On site research and inspection; company records

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: Site specific for Fidelity Mine in southern Illinois; other general information.

FORMAT OF DATA: Published Article

221

Seastrom, P. N. 1965. New land orchards. Proc. Coal Mine Spoil Reclamation Symp., Penn State Univ., University Park, Pa., Oct. 11-14, p. 129-136.

INDEX UNDER: Mine Land Reclamation & Utilization - orchards/ Perry County

ABSTRACT: This article discusses reclamation of surface mined lands by planting of orchards. The Black Diamond Orchards at the United Electric Fidelity Mine near DuQuoin, Illinois is utilized as an example. Horticultural investigations and practices conducted at that site and other reclamation practices are briefly discussed.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1938-1965 PERCENT COMPLETED: 100%

ACCURACY OF DATA: Company records

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: General information for areas in Perry County, Illinois.

FORMAT OF DATA: Published Article

222

Seitz, W. D. 1972. An analysis of strip-mining and local taxation practices. Illinois Agricultural Economics 12(1):23-30.

INDEX UNDER: Other - taxation

ABSTRACT: This paper points out the need for action to offset the reduction in the tax base in counties where surface mining is concentrated. Suggested improvements include changing the physical character of the spoilbanks, implementation of more stringent reclamation requirements, and alteration of tax law, practice or administration at the county or state level. Considerable data is tabulated for certain counties in Illinois.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1970-1972 PERCENT COMPLETED: 100%

ACCURACY OF DATA: Published records

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: Specific for counties in Illinois.

FORMAT OF DATA: Published Article

223

Sibley, D. 1965. The bituminous coal industry of southern Illinois 1880-1940: a case study in industrial organization. Unpublished M.A. Thesis, Dept. Geography, Southern Illinois University - Carbondale, 80 p.

INDEX UNDER: Other - coal economics

ABSTRACT: This study discusses the spatial implications of the changing economic character of coal production in southern Illinois from 1880 to 1940.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1880-1940 PERCENT COMPLETED: 100%

ACCURACY OF DATA: Published articles and reports

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: General for southern Illinois; some data specific for counties of southern Illinois.

FORMAT OF DATA: M.A. Thesis

ILLINOIS MINED LAND OSM BIBLIOGRAPHY

224

Slater, W. 1979. Food vs. energy: central Illinois farmers wage war on strip mining. Southern Illinoisan, Monday July 9, p. 22.

INDEX UNDER: Mine Land Reclamation & Utilization - agriculture / Knox County

ABSTRACT: This article depicts the prevailing conflict between agricultural interests and the coal mining industry in the prime farmland region of central Illinois.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1979 PERCENT COMPLETED: 100%

ACCURACY OF DATA: Interviews with local farmers and coal company officials.

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: General information for Knox County, Illinois.

FORMAT OF DATA: Newspaper Article

225

Smith, J. M., D. Ostendorf, and M. Schechtman. 1978. Who's mining the farm. Illinois South Project, Herrin, Ill. 76 p.

INDEX UNDER: Refuse Dumps/ Inventory Data - land ownership/ Other - coal economics/ Williamson, Knox Counties.

ABSTRACT: An attempt to assess current land ownership, control, and use by coal companies and their agricultural subsidiaries in Illinois coal counties and examination of implications and impacts of this corporate investment on the people, land, communities, and economy of Knox and Williamson Counties are provided in this report. Methodology utilized in the survey are outlined. An evaluation of taxation practices at county and state levels of government is provided. Profile of coal company land ownership is provided in an appendix for 35 coal producing counties in Illinois. (from text)

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1977-1978 PERCENT COMPLETED: 100%

ACCURACY OF DATA: Published data; county records and plat books

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: General for Illinois; coal industry ownership of land in 35 counties listed; case studies for Williamson and Knox counties.

FORMAT OF DATA: Published Report

226

Smith, W. H. 1957. Strippable coal reserves of Illinois. Part 1 - Gallatin, Hardin, Johnson, Pope, Saline, and Williamson Counties. Ill. State Geological Survey Circular 228, 39 p. + map, plate.

INDEX UNDER: Inventory Data - coal reserves/ Gallatin, Hardin, Johnson, Pope, Saline, Williamson Counties.

ABSTRACT: Strippable coal reserves for the region of southern Illinois including the counties of Gallatin, Hardin, Johnson, Pope, Saline and Williamson are estimated at approximately 1.5 billion tons in the six principal coal beds mapped. Maps of each principal coal bed show outcrops, mined-out areas, thickness of coal and overburden thickness. (from abstract)

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1957 PERCENT COMPLETED: 100%

ACCURACY OF DATA: Collected by Survey Geologists; published data; maps; Illinois Coal Strippers Assoc.

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: Specific for counties of Illinois listed; information by township, section, county, and depth of seam.

FORMAT OF DATA: Published Circular

227

Smith, W. H. 1958. Strippable coal reserves of Illinois. Part 2 - Jackson, Monroe, Perry, Randolph, and St. Clair Counties. Ill. State Geological Survey Circular 260. 36 p. + map, plate.

INDEX UNDER: Inventory Data - coal reserves/ Jackson, Monroe, Perry, Randolph, St. Clair Counties

ABSTRACT: Approximately 3 billion tons of strippable coal reserves, coal in beds 18 inches or more thick with overburden not exceeding 150 feet, are estimated to be present in the four principal coal beds mapped for this region. Data are tabulated by township for each county and include quantity of strippable coal estimated for each category of coal thickness, overburden thickness, and reliability of estimate. Maps show outcrops, mined-out areas, and thickness of coal. (from abstract)

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1958 PERCENT COMPLETED: 100%

ACCURACY OF DATA: Well logs and maps in Technical Files of Illinois State Geological Survey

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: Specific for counties listed; information in tables and maps by county, township, and depth of coal seams.

FORMAT OF DATA: Published Circular

228

Smith, W. H. 1961. Strippable coal reserves of Illinois. Part 3 - Madison, Macoupin, Jersey, Greene, Scott, Morgan, and Cass Counties. Ill. State Geological Survey Circular 311. 40 p.

INDEX UNDER: Inventory Data - coal reserves/ Madison, Macoupin, Jersey, Greene, Scott, Morgan, and Cass Counties

ABSTRACT: This report is concerned with large reserves of No. 2 and No. 6 coals in the western parts of Madison and Macoupin Counties and in Jersey, Greene, Scott, Morgan, and Cass Counties. Information is compiled on two maps, one for No. 2 coal and one for No. 6 coal, published at a scale of one-half inch to the mile. Outcrops, mined-out areas, and thickness of the coal are shown. Overburden thickness is shown by isopath lines. Quantity of strippable coal is tabulated by township for each county. Structure contours are delineated on a third map and stratigraphic relationships in the Pennsylvanian strata of the various counties are shown on three north-south cross sections.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1961 PERCENT COMPLETED: 100%

ACCURACY OF DATA: Published data; reports, drill well records, maps of Illinois State Geological Survey Technical Files.

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: Specific for counties listed; information supplied by county, township and coal seam in tables and maps.

FORMAT OF DATA: Published Circular

229

Smith, W. H. 1968. Strippable coal reserves of Illinois. Part 6 - LaSalle, Livingston, Grundy, Kankakee, Will, Putnam, and parts of Bureau and Marshall Counties. Ill. State Geological Survey Circular 419. 29 p.

INDEX UNDER: Inventory Data - coal reserves/ LaSalle, Livingston, Grundy, Kankakee, Will, Putnam, Bureau, Marshall Counties.

ABSTRACT: This report describes strippable coal reserves in all or parts of eight counties in northeastern Illinois. Maps scaled at one-half inch to the mile show coal outcrops, mined-out areas, coal thickness, and overburden thickness. Structure of the Colchester (No. 2) coal is shown on a smaller scale map. Strippable reserves were estimated and are mapped in detail for the Colchester (No. 2), Summum (No. 4), Herrin (No. 6), and Danville (No. 7) coals. Other locally occurring coals at strippable depth are described but no estimate of strippable reserves is given. The geology and stratigraphy of the principal coal deposits in the area are described briefly and illustrated by cross section diagrams. The quantity of strippable coal, categorized by thickness of coal, thickness of overburden, and reliability of estimates, is tabulated by township for each county. (from author's abstract)

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1968 PERCENT COMPLETED: 100%

ACCURACY OF DATA: Drill well records, maps, other data of Ill. State Geological Survey Technical files

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: Specific for counties listed; information supplied as maps, drill well records and tables by county, township and coal seam

FORMAT OF DATA: Published Circular

230

Smith, W. H., and D. J. Berggren. 1963. Stippable coal reserves of Illinois. Part 5A - Fulton, Henry, Knox, Peoria, Stark, Tazewell, and parts of Bureau, Marshall, Mercer, and Warren Counties. Ill. State Geological Survey Circular 348. 59 p.

INDEX UNDER: Inventory Data - strippable reserves/ Fulton, Henry, Knox, Peoria, Stark, Tazewell, Bureau, Marshall, Warren, Mercer Counties

ABSTRACT: This report describes the strippable coal reserves in counties of western Illinois. Maps scaled one-half inch to the mile show coal outcrops, mined-out areas, coal thickness, and overburden thickness. Strippable reserves were estimated and are mapped in detail for Rock Island (No. 1), Colchester (No. 2), Springfield (No. 5), Herrin (No. 6), and Danville (No. 7) coals. Nonpersistent but strippable coals are described but no estimates of reserves are provided. (from author's abstract)

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1963 PERCENT COMPLETED: 100%

ACCURACY OF DATA: Published data; records, drill well records of Ill. State Geological Survey files.

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: Specific for counties listed; information by county, township, and coal seam.

FORMAT OF DATA: Published Circular

231

Smith, V. G. 1928. Animal communities of a deciduous forest succession. Ecology 9(4):479-500.

INDEX UNDER: Mine Land Reclamation & Utilization - wildlife/ Vermilion County

ABSTRACT: This report describes the results of a study of animal community development on six successional stages of deciduous forest development; four of the early stages were on surface-mined land in Vermilion County, Illinois. Invertebrate animals were the primary emphasis of the study. Community development was discussed relative to the perennial nucleus and fluctuations due to seasonal addition of socies to the nucleus as well as to seasonal changes in the populations of the nucleus.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1925-1926 PERCENT COMPLETED: 100%

ACCURACY OF DATA: On site investigations

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: Specific for sites in Vermilion County, Illinois.

FORMAT OF DATA: Published Article

232

Southwestern Illinois Coal Corporation. no date. From vision to reality. Southwestern Illinois Coal Corporation, 5 p.

INDEX UNDER: Mine Land Reclamation & Utilization - recreation, agriculture, forestation / Perry, Randolph Counties

ABSTRACT: This pamphlet outlines the early reclamation program of Southwestern Illinois Coal Corporation. Recreation, agriculture and reforestation were included in the program.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1936 -- PERCENT COMPLETED: 100%

ACCURACY OF DATA: Company records

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: General information; site specific for areas in Perry and Randolph Counties, Illinois.

FORMAT OF DATA: Pamphlet

233

Stahl, J. B. 1970. Bibliography on limnology of surface-mined areas. Unpublished Mimeograph. Surface-Mining Seminar, Southern Illinois University-Carbondale, 7 p.

INDEX UNDER: Surface Water Impoundments/ Acid Mine Drainage/ Metal Pollution/ Other - bibliography

ABSTRACT: This general bibliography on the limnology of surface-mined lands was compiled for a seminar on surface-mining at Southern Illinois University-Carbondale in 1970. There are a variety of articles on acid mine drainage pollution and water quality of streams and surface water impoundments.

SUPPLEMENTARY INFORMATION

TIME PERIOD: up to 1969 PERCENT COMPLETED: N/A

ACCURACY OF DATA: Published reports; theses

QUANTITIES OF DATA: ~100 citations

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: Information from various states including Illinois.

FORMAT OF DATA: Mimeograph Copy

234

Stahl, R. W. 1964. Survey of burning coal-mine refuse banks. U. S. Dept. Interior, Bureau of Mines Circular 8209. 39 p.

INDEX UNDER: Mine-Refuse Fires/ Refuse Dumps

ABSTRACT: Burning coal-mine refuse banks were surveyed in 15 states. The following characteristics were tabulated for 495 banks: county; name, population, and distance of nearest town; size and status of bank; status and stage of fire; and topography. Methods of controlling fires were reviewed; the compacting and sealing technique proved most satisfactory. Means for preventing refuse-bank fires by proper construction of the banks are described.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1962-1963 PERCENT COMPLETED: 100%

ACCURACY OF DATA: On site inspection by Bureau of Mines engineer or other designated inspector.

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: Site specific by county in 15 surveyed states by means of illustrated maps and tables.

FORMAT OF DATA: Published Circular

235

Stannard, L. J. 1967. The redispersal of Thysanoptera (Insecta, Thrips) into spoiled strip-mined lands in southern Illinois. Trans. Ill. Acad. Sci. 60(2):131-133.

INDEX UNDER: Mine Land Reclamation & Utilization - wildlife/ Perry County

ABSTRACT: Three pioneer species of thrips have not successfully invaded areas covered by the Wisconsin Ice Sheet, but have invaded surface-mined land less than 16 years after mining ceased. Two other species found in nearby wooded lands had not invaded the mined lands but were well established on land glaciated by the Wisconsin Ice Sheet.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1964 PERCENT COMPLETED: 100%

ACCURACY OF DATA: On site inspection.

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: Site specific for Pyatts Research Area, Perry County, Illinois.

FORMAT OF DATA: Published Article

236

Stevens, T. 1978. Coal 'waste' may really be good. Southern Illinoisan, Wednesday, Oct. 4, p. 3.

INDEX UNDER: Refuse Dumps/ Mine Land Reclamation & Utilization - coal recovery

ABSTRACT: This article reports on the Task Force for Reclamation of Coal of the Illinois Energy Resources Commission hearing in Marion, Illinois where the potential recovery of coal from gob and slurry was examined.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1978 PERCENT COMPLETED: N/A

ACCURACY OF DATA: On site inspection; testimony of various witnesses

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: General for Illinois

FORMAT OF DATA: Newspaper Article

237

Stucky, D. J., and T. S. Newman. 1977. Effect of dried, anaerobically digested sludge on yield and element accumulation in tall fescue and alfalfa. J. Environ. Qual. 6(3):271-274.

INDEX UNDER: Erosion/ Metal Pollution/ Mine Land Reclamation & Utilization - sewage sludge/ Williamson County

ABSTRACT: Results of a greenhouse pot study on effect of application of sewage sludge on surface-mined soils are discussed. Support of plant growth and erosion prevention on surface-mined spoils is possible by incorporation of 314 metric tons/ha of dried sewage sludge to a depth of 10 cm. Increase in forage yields is attributed to increase in pH, greater soil volume for root growth and availability of additional nutrients. Effects of heavy metal accumulation in plants with increased sludge application are presented and discussed.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1977 PERCENT COMPLETED: 100%

ACCURACY OF DATA: On site inspection; published data; greenhouse studies

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: General for southern Illinois; site specific for Palzo in Williamson County.

FORMAT OF DATA: Published Article

238

Sukthumrong, A. 1975. The role of earth cover depths and upward acid diffusion on the survival and distribution of vegetation on coal refuse piles. Unpublished Ph.D. Dissertation, University of Illinois, Urbana-Champaign, 126 p.

INDEX UNDER: Refuse Dumps/ Mine Land Reclamation and Utilization - revegetation /Macoupin, Montgomery, Fulton Counties

ABSTRACT: Ages of abandonment of refuse piles have pronounced effects on the chemical properties of refuse piles in relation to their capacity for acid water production and the ease of reclamation. Recent refuse piles are highly acidic containing large amounts of water-soluble acidic products and large amounts of total sulfur and hydrogen peroxide oxidizable sulfur. On the other hand, old refuse piles are relatively low in acidic products and the acidity is present largely as adsorbed exchangeable aluminum. Both old and recent refuse piles are reclaimable by the application of sufficient quantities of limestone. Reclamation of refuse piles by the vegetated earth covering method is subject to upward acid diffusion from the refuse into the earth cover layers. Upward acid diffusion may cause reclamation failures on recent refuse piles having soluble acidic product contents. Diffusion barriers of lime could prevent upward diffusion and reduce reclamation costs. Vegetation can be established directly on many coal refuse piles through application of sufficient quantities of limestone. The effect of lime in retarding pyrite oxidation was not apparent. The failure of vegetation at low lime rates may be due to iron coating on lime which results in the failure of lime to neutralize the resident acidity present in coal refuse. (author's summary)

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1974 PERCENT COMPLETED: 100%

ACCURACY OF DATA: On site collection; laboratory analyses

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: Site specific for 6 refuse piles in Macoupin, Montgomery, and Fulton Counties, Illinois.

FORMAT OF DATA: Ph.D. Dissertation

239

Sullivan, R. L. 1978. Selected characteristics of coal refuse and associated surface water from preparation sites of Illinois deep mines. Unpublished M. S. Research Report, Southern Illinois University-Carbondale. 97 p.

INDEX UNDER: Acid Mine Drainage/ Refuse Dumps

ABSTRACT: The study's objectives were to characterize refuse and associated waters to evaluate water quality, and to evaluate refuse and drainage characteristics as they relate to coal seam and refuse age. Mine drainage samples indicated pollutional discharges were entering Illinois waters and terrestrial areas. Most Above Mine samples were within acceptable limitations; however, General Runoff and Below Mine waters exceeded established limits. Flowing Runoff may have had a larger impact on receiving waters than the concentration would imply due to the continuously flowing nature of Flowing Mine Openings. Off-Site Terrestrial Areas that had been flooded by General Runoff waters reflected the influence of acid mine drainage. No consistent correlations were found between precipitation and drainage characteristics. There appeared to be an increase in adverse characteristics from seam No. 2 through No. 7. However, the pollutional impact of seam No. 6 was probably greatest due to its larger number of mines. Unburned gob had more adverse characteristics than did burned gob as exhibited by pH, conductivity, and potential acidity. Refuse conditions appeared to improve with age; however, this relationship was too small to be of importance in reclamation planning. (author's summary)

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1976 PERCENT COMPLETED: 100%

ACCURACY OF DATA: On site collection; laboratory analyses

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: Specific for Illinois; data by coal seam, age of refuse, and some by county.

FORMAT OF DATA: M. S. Research Report

240

Terpening, V. A., B. N. Jacobson, J. R. Nawrot, M. J. Sweet, M. T. Dooley, A. L. Dooley, D. L. Damrau, and W. D. Klimstra. 1975. Environmental inventory and assessment of the proposed New Delta Mine expansion in southeastern Illinois. Coop. Wildl. Res. Lab, Southern Illinois University - Carbondale, 156 p., 6 Figs. + 116 p. Appendix.

INDEX UNDER: Other - environmental assessment/ Williamson, Saline Counties

ABSTRACT: This report provides the results of a pre-mining inventory and assessment of 6,500 acres in Williamson and Saline Counties. Soil categories and chemistry, land-use types and trends, and recreational use of the study area are discussed. Results of inventories of plants, mammals, birds, amphibians, reptiles, fishes, and macroinvertebrates associated with each habitat are presented and discussed. Rare and endangered species of the study area are documented. Present water quality was assessed. A discussion of the impact of surface mining and aspects of reclamation conclude the paper. Data are provided in 116 pages of Appendices and six maps.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1974-1975 PERCENT COMPLETED: 100%

ACCURACY OF DATA: On site investigation; laboratory analyses

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: Specific for sites in Williamson and Saline counties, Illinois

FORMAT OF DATA: Published Report

241

Thompson, J. R. 1977. Reclamation of strip-mined lands - an Illinois demonstration project. Illinois Science News 1(4):2-4.

INDEX UNDER: Mine Land Reclamation & Utilization - general/ Macoupin County

ABSTRACT: This article by Governor Thompson of Illinois points out two of the efforts by the state of Illinois to reclaim surface-mined land or land affected by other mining operations. Passage of the 1971 Illinois Strip-Mining Reclamation Act and amendments in 1975 was the first action noted by the author. Discussion of completed and future research on the Macoupin County (Staunton) Land Reclamation Demonstration Project included monitoring to determine effects on the environment and grading, covering and seeding. Future plans are to monitor the area for a period of 3 to 5 years.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1977 PERCENT COMPLETED: 100%

ACCURACY OF DATA: Source unknown

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: General for Illinois specific for sites in Macoupin County.

FORMAT OF DATA: Published Newsletter

242

Thurn, E. A. 1953. The potentialities of revegetating and utilizing agronomic species on strip mined areas in Illinois. Ill. Agricultural Experiment Station and Ill. Coal Strippers Association. 6th Year Progress Report. 48 p.

INDEX UNDER: Highwalls/ Mine Land Reclamation & Utilization - agricultral, pasture

ABSTRACT: This report covers the first year of a new 3-year project designed to study basic principles of agronomic species on graded surface-mined land. The research was confined to graded areas primarily in western Illinois. Data covering investigations of physical and chemical properties of soil, characteristics of the strata in the highwall (overburden properties), forage crops, grain crops and tree killing experiments are presented in tabular form and discussed.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1952-1953 PERCENT COMPLETED: On going

ACCURACY OF DATA: On site investigation; laboratory analyses

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: Studies confined to graded surface mined areas in western Illinois.

FORMAT OF DATA: Annual Progress Report

243

Treworgy, C. G., L. E. Bengal, and A. G. Digwell. 1978. Reserves and resources of surface-minable coal in Illinois. Ill. State Geol. Survey Circular 504, 44 p.

INDEX UNDER: Inventory Data - coal reserves

ABSTRACT: After consideration of economical and legal factors affecting coal surface mining in Illinois, six billion tons of coal are considered strippable. Approximately 38 percent of stippable reserves exceed 4 feet in thickness, and a majority of these lie under 50 plus feet of overburden. Highest concentrations of surface-mine produced coal is and will continue to be from southwestern and southern Illinois. (from abstract)

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1978 PERCENT COMPLETED: 100%

ACCURACY OF DATA: Published data

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: Specific data presented b coal seam and/or block, county, and coal mining districts in Illinois.

FORMAT OF DATA: Published Circular

244

Tuan, F. C., and J. T. Scott, Jr. 1979. Impact of coal strip mining and stripped land reclamation program on regional income: the case of Fulton and Knox Counties, Illinois. Illinois Agricultural Economics Staff Paper, No. 79E-82. Dept. Agr. Economics, Univ. of Illinois, Urbana, 42 p.

INDEX UNDER: Other - coal economics/ Mine Land Reclamation & Utilization - general/ Fulton, Knox Counties

ABSTRACT: This paper provides mathematical models for assessing economic impacts of surface coal mining in Knox and Fulton Counties, Illinois. Difficulties associated with assessing true economic impacts of mining are discussed.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1979 PERCENT COMPLETED: 100%

ACCURACY OF DATA: Published data

QUANTITIES OF DATA: Simulation data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: Specific for Fulton and Knox Counties.

FORMAT OF DATA: Published Article

245

Tyner, E. H. 1975. Upward acid diffusion, a factor influencing the distribution and survival of forage species on earth-mantled coal waste piles. Proc. 2nd Inter-University Energy Conf., Constraints of Coal Utilization, SIU-Carbondale, p. 14-15.

INDEX UNDER: Acid Mine Drainage/ Refuse Dumps/ Mine Land Reclamation & Utilization - general

ABSTRACT: Summation of "gob" pile studies in southern Illinois reveal that 70 percent of total annual acid discharge is from surface runoff and diffuse upward into earth mantles. Inadequate depth of earth coverage can be critical for plant survival during initial weathering of these piles. Substantial decreases in resident soluble acidity to depths of 40 inches have been found during studies of old waste piles. Successful reclamation of old waste piles can be accomplished with mantle thickness much less than the 4 feet required by Illinois law.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1974-1975 PERCENT COMPLETED: 100%

ACCURACY OF DATA: On site inspection and experimentation

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: Specific for southern Illinois.

FORMAT OF DATA: Published Abstract

246

Urbanek, R. P. 1976. Vertebrate and floral diversity on strip-mined land in Williamson and Saline Counties, Illinois. Unpublished M.A. Thesis, Southern Illinois University - Carbondale, 146 p.

INDEX UNDER: Mine Land Reclamation & Utilization - wildlife, revegetation/ Williamson, Saline Counties

ABSTRACT: This study describes the species composition of flora and vertebrate fauna on surface-mined lands in Bankston Fork watershed in Williamson and Saline Counties. Species distribution by habitat and a comparison of floral and faunal community structure among various habitats of mined and unmined land are provided. A discussion of the value of current reclamation practices to wildlife on surface-mined lands concludes the paper.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1974-1976 PERCENT COMPLETED: 100%

ACCURACY OF DATA: On site examination

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: Specific for the Bankston Fork watershed in Williamson and Saline Counties, Illinois.

FORMAT OF DATA: M.A. Thesis

247

U.S. Army Engineer District. 1978. Peabody Coal Company proposed extension of Pit No. 3, New Athens, Illinois. Draft Environmental Statement, U.S. Army Eng. District, St. Louis, Mo., 41 p. + 39 p. Appendices, Figs.

INDEX UNDER: Other - environmental assessment/ St. Clair County

ABSTRACT: This is an environmental statement of proposed construction of levees, draining and surface mining of 40 acres of a bypassed channel and 200 acres of Kaskaskia River bottomland near New Athens, Illinois. Report segments provide information on area description, environmental impacts, adverse environmental impacts, and alternatives to the proposed action.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1967-1978 PERCENT COMPLETED: 100%

ACCURACY OF DATA: On site collection; published data

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: Specific for site near New Athens, St. Clair County, Illinois.

FORMAT OF DATA: Draft Environmental Statement

248

U. S. Department of Agriculture. 1973. Restoring surface-mined land. U. S. Dept. Agr., Misc. Publ. No. 1082, 14 p.

INDEX UNDER: Mine Land Reclamation & Utilization - general

ABSTRACT: This article presents a general overview of surface mine reclamation in the United States. Information on extent of surface mining, mined land reclaimed by cooperators with conservation districts and potential multiple and alternative uses of surface-mined areas is tabulated by state.

SUPPLEMENTARY INFORMATION

TIME PERIOD: up to 1972 PERCENT COMPLETED: 100%

ACCURACY OF DATA: From State and U.S. Conservation service records.

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: General for United States; some specific information by states.

FORMAT OF DATA: Pamphlet

249

U.S. Environmental Protection Agency. 1976. Sludge disposal and land reclamation in Fulton County, Illinois. Draft, Environmental Impact Statement, U.S. E.P.A., Region V, Chicago, Ill. 410 p.

INDEX UNDER: Mine Land Reclamation and Utilization-sewage sludge/ Fulton County/ Other - health

ABSTRACT: This draft environmental impact statement evaluates the cost-effectiveness and environmental compatibility of sludge application on surface-mined land in Fulton County, Illinois. The Metropolitan Sanitary District of Greater Chicago is the grant applicant for this sludge application/land reclamation program. Chapter 1 provides an overview of major findings relative to existing project site and operations, cost-effectiveness of alternative methods of sludge processing and disposal, current conditions of the environment, significant socio-economic and environmental effects of the project, and mitigative and preventive measures. Chapters 2 through 9 provide detailed information on background, description of project, present conditions of the environment, cost-effectiveness of alternative methods of sludge processing and disposal, significant socio-economic and land use effects of alternative actions, significant environmental effects of the project, and direct and indirect health effects of the project. An Illinois Environmental Protection Agency water pollution control permit; atmospheric ammonia concentrations, by temperature and windspeed; and trends in nitrite and nitrate nitrogen in wellwater are provided in Appendices. Included in the statement are 68 figures and 84 tables containing information pertinent to the study.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1976 PERCENT COMPLETED: 100%

ACCURACY OF DATA: Published articles; on site work and inspection; records of G.M.S.D.C.

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: Specific for Fulton County, Illinois; much information general for Illinois.

FORMAT OF DATA: Draft Environmental Statement

250

U. S. Forest Service. 1972. Palzo restoration project - final environmental statement. U. S. Dept. Agriculture, Forest Service, Vienna Ranger District, Shawnee National Forest. 102 p.

INDEX UNDER: Erosion/ Surface Water Impoundments/ Acid Mine Drainage/ Metal Pollution/ Refuse Dumps/ Mine Land Reclamation & Utilization - sewage sludge, revegetation/ Williamson, Saline, Gallatin Counties

ABSTRACT: The pilot project described in this statement deals with the application of anaerobically digested municipal waste on surface-mined land. Methods of sludge application, vegetative response, and water quality improvement are major factors to be studied. The expected environmental impact will be to significantly reduce the water pollution problem now associated with the tract as well as to control extensive erosion through establishment of vegetative cover.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1972-1975 PERCENT COMPLETED: 0%

ACCURACY OF DATA: On site investigation

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: Specific for Palzo Tract in Williamson County, Illinois; water pollution in Williamson, Saline, and Gallatin Counties reported.
FORMAT OF DATA: Published Report

251

Verts, B. J. 1956. A place to hunt. Illinois Wildlife 12(1):4.

INDEX UNDER: Mine Land Reclamation and Utilization - wildlife/ Perry County

ABSTRACT: This general article describes early attempts by the Cooperative Wildlife Research Laboratory at Southern Illinois University-Carbondale to develop wildlife habitat on surface-mined lands. Early phases of the research project included surveys of wildlife populations and habitats. Data on game harvested by public hunting and trapping are provided for two seasons.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1954-1956 PERCENT COMPLETED: 100%

ACCURACY OF DATA: On site inspection

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: Site specific for Pyatts Research Area, Perry County, Illinois.

FORMAT OF DATA: Published Article

252

Verts, B. J. 1956. An evaluation of wildlife and recreational values of a strip-mined area. Unpublished M. S. Thesis, Southern Illinois University - Carbondale, 61 p.

INDEX UNDER: Surface Water Impoundments/ Mine Land Reclamation & Utilization - wildlife, recreation/ Perry County

ABSTRACT: This report evaluates the wildlife and recreational attributes of surface-mined lands in Perry County, Illinois. A survey of birds and mammals revealed 89 and 26 species, respectively, utilizing the area. Public utilization of the area was primarily devoted to hunting or fishing but included trapping, boating, target shooting, picnicking and swimming. Evaluation of the area's potential for wildlife and recreation include discussions of vegetational features, water areas, unmined lands, and development of the area. Recommendations for futher development and management conclude the paper.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1954-1956 PERCENT COMPLETED: 100%

ACCURACY OF DATA: On site observation

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: Site specific for Pyatts Research Area, Perry County, Illinois.

FORMAT OF DATA: M.S. Thesis

253

Verts, B. J. 1957. The population and distribution of two species of Peromyscus on some Illinois strip-mined land. J. Mammal. 38:53-59.

INDEX UNDER: Mine Land Reclamation & Utilization - wildlife/ Perry County

ABSTRACT: Results of a survey of mammals on surface-mined land in Perry County, Illinois, relative to the distribution and abundance of two species of Peromyscus are described in this report. Peromyscus maniculatus bairdii had a higher population density in the winter-spring trapping period than in the summer-autumn period. Populations of P. leucopus were approximately equal during both trapping periods. Animals tended to be more abundant in both the oldest and most recent stripped areas. P. leucopus was the only species found in spoils stripped prior to 1936 but P. M. bairdii was the predominant form in the most recent surface-mined spoils. No measurable differences were found in plant species composition between earliest and latest strippings; Peromyscus distribution could not be explained by vegetation on the spoils. (from summary)

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1954-1955 PERCENT COMPLETED: 100%

ACCURACY OF DATA: On site collection and evaluation

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: Site specific for Pyatts Research Area, Perry County, Illinois.

FORMAT OF DATA: Published Article

254

Verts, B. J. 1959. Notes on the ecology of mammals of a strip-mined area in southern Illinois. Trans. Ill. State Acad. Sci. 52(3&4):134-139.

INDEX UNDER: Mine Land Reclamation & Utilization - wildlife/ Perry County

ABSTRACT: This report describes the results of a study on the ecology of mammals on a southern Illinois surface-mined area with special emphasis on factors which limited distribution of various species on such lands. Evidence of 26 species of mammals was found on the site. These were placed into 4 ecological groups: those becoming established on older surface-mined land, those established on recently mined areas but absent or scarce in older areas, those distributed throughout the area, and species limited by some special factor to a localized habitat. (from summary)

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1954-1955 PERCENT COMPLETED: 100%

ACCURACY OF DATA: On site investigation

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: Site specific for Pyatts Research Area, Perry County, Illinois.

FORMAT OF DATA: Published Report

255

Vohs, P., Jr., and D. E. Birkenholz. 1962. Response of bobwhite quail to management on some Illinois strip-mined lands. Trans. Ill. State Acad. Sci. 55(1):13-19.

INDEX UNDER: Mine Land Reclamation & Utilization - wildlife/ Perry County

ABSTRACT: This report summarizes management techniques and habitat development on the Pyatts Research Area in Perry County, Illinois. The bobwhite population increased from 46 birds in 1954 to 279 in 1959 as a result of the habitat manipulation practices on the 920 acre site. A detailed discussion of habitat development, utilization by quail, food habits of the birds and potential implication for surface-mined land management for wildlife is provided.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1954-1959 PERCENT COMPLETED: 100%

ACCURACY OF DATA: On site observation; records of Coop. Wildl. Res. Lab., SIU-C

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: Site specific for Pyatts Research Area, Perry County, Illinois

FORMAT OF DATA: Published Article

256

Weber, L. S. 1970. The development and use of coal surface-mined lands in Illinois. Ill. State Geol. Surv., Environmental Geology Notes No. 46, p. 41-46.

INDEX UNDER: Mine Land Reclamation & Utilization - forestation, recreation, pasture/ Other - historical

ABSTRACT: A brief history of surface-mining for coal is provided; the first commercial surface coal mining recorded in the United States was near the city of Danville, Illinois in 1866. Brief reviews of mining equipment and reclamation including tree growth, forage production, recreational use and other minor uses of mined lands are provided.

SUPPLEMENTARY INFORMATION

TIME PERIOD: up to 1970 PERCENT COMPLETED: N/A

ACCURACY OF DATA: Published data

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: General for Illinois.

FORMAT OF DATA: Published Paper

257

Wetzel, R. M. 1958. Mammalian succession on midwestern floodplains. Ecology 39(2):262-271.

INDEX UNDER: Mine Land Reclamation & Utilization - wildlife/ Vermilion, Piatt, Champaign counties

ABSTRACT: This article provides information on mammal population changes during a fifteen year study (1940-1955) of a coal stripped floodplain in eastern Illinois. Population level of small mammals was quickly built up within 7 years of stripping entirely by the prairie deer mouse, *Peromyscus maniculatus bairdi*. Drop in initial invaders was followed by influx of prairie vole, *Microtus ochrogastor*, short-tailed shrew, *Blarina brevicauda*, and the white-footed mouse, *Peromyscus leucopus noveboracensis*. Grassland inhabitants of forest edge stage such as *Microtus*, bog lemming, *Synaptomys cooperi*, and meadow jumping mouse, *Zapus hudsonius* decreased in density as tree leaf litter and forest floor plants replaced grasses. *Peromyscus lucopus* population increased slowly because of the long period of time needed to develop a closed canopy. Trend toward a drier environment, increase in invertebrate food, and increase in plant food resulting from invasion of tree species such as oaks and hickories are all trends in habitat succession which permit increase in small mammal populations. (*from summary and conclusions*)

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1940-1955 PERCENT COMPLETED: 100%

ACCURACY OF DATA: On site investigation; published data

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: Specific for sites in Kickapoo State Park in Vermilion County, Sangamon River floodplain in Piatt County, and Brownfield Wood in Champaign County.

FORMAT OF DATA: Published Article

258

Wewerka, E. M., and J. M. Williams. 1977. Trace element characterization and removal/recovery from coal and coal wastes. Los Alamos Scientific Laboratory, Univ. California, 11 p.

INDEX UNDER: Acid Mine Drainage/Metal Pollution/Refuse Dumps

ABSTRACT: This document describes the research activities for fiscal year 1978 for the Environmental Protection Agency, Department of Energy program on environmental contamination from trace elements in coal preparation wastes from selected samples of Appalachian Basin coal refuse, with the aim of delineating suitable pollution control technology or research, development and demonstration programs. (from abstract)

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1977-1978 PERCENT COMPLETED: On going

ACCURACY OF DATA: Data will come from on site study

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: Study will deal with data collected.

FORMAT OF DATA: Published Report

259

Wewerka, E. M., J. M. Williams, and P. L. Wanek. 1976. Assessment and control of environmental contamination from trace elements in coal processing wastes. EPA -- OEMI Symp., 5 p.

INDEX UNDER: Acid Mine Drainage/ Metal Pollution/ Refuse Dumps

ABSTRACT: This article discusses development of a program to assess environmental contamination from trace elements in coal processing wastes. Initial phases of the program were to obtain fundamental information about structures and behavior of materials. Fate of trace elements during weathering and burning of coal wastes would be determined by field and laboratory tests. Once the above information was obtained as a base, chemical or physical methods to prevent or control environmental contamination by trace elements were to be investigated.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1976 PERCENT COMPLETED: On going

ACCURACY OF DATA: Published reports

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: General; some specific information for Illinois.

FORMAT OF DATA: Published Article

260

Wewerka, E. M., J. M. Williams, P. L. Wanek, and J. D. Olsen. 1976. Environmental contamination from trace elements in coal preparation wastes; a literature review and assessment. Interagency Energy-Environment Research and Development Program Report. EPA-600/7-76-007, and ERDA LA 6600-MS. 61 p.

INDEX UNDER: Mine-Refuse Fires/Acid Mine Drainage/Metal Pollution/Refuse Dumps.

ABSTRACT: This report is a collection and evaluation of the available information on the chemistry and behavior of trace elements in coal processing wastes. This information will be utilized to assess the potential for environmental contamination from the trace elements in these wastes. The behavior of trace elements during refuse weathering, leaching and burning is not well understood. (from abstract)

SUPPLEMENTARY INFORMATION

TIME PERIOD: up to 1976 PERCENT COMPLETED: 100%

ACCURACY OF DATA: Review of published papers

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: General information with reference to Illinois.

FORMAT OF DATA: Published Article

261

Williams, J. M., E. M. Wewerka, N. E. Vanderborgh, P. Wagner, P. L. Wanek, and J. D. Olsen. 1977. Environmental pollution by trace elements in coal preparation wates. Symp. on Coal Mine Drainage Research. 7:51-60.

INDEX UNDER: Acid Mine Drainage/Metal Pollution/Refuse Dumps/Indiana, Kentucky.

ABSTRACT: This study deals with the chemistry of environmentally harmful trace elements released in the drainage of coal preparation wastes and the need to develop control technology for removing or recovering the elements of environmental or economic interest. The coal preparation waste from the southern part of the Illinois Basin was utilized in the analyses.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1975-1976 PERCENT COMPLETED: 100%

ACCURACY OF DATA: On site study

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: Data from southern part of Illinois Basin which includes Illinois, Indiana, and western Kentucky.

FORMAT OF DATA: Published Presentation

262

Yeager, L. E. 1942. Coal-stripped land as a mammal habitat, with special reference to fur animals. Amer. Midl. Nat. 27(3):613-635.

INDEX UNDER: Mine Land Reclamation and Utilization-wildlife/Indiana, Missouri/Vermilion County.

ABSTRACT: This report describes coal-mined lands in the central states as a small, but unique and recently-created biological habitat. Characteristic physical features of surface-mined lands, vegetational features, ratio of water to land, and succession of the areas are discussed. The value of these lands for the production of fur-bearing mammals is discussed.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1930's-1942 PERCENT COMPLETED: 100%

ACCURACY OF DATA: On site survey; published data; fur catch records

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: General for Vermilion County, Illinois and sites in Missouri and Indiana.

FORMAT OF DATA: Published Article

263

Yopp, J. H., and W. J. Sunberg. 1978. A study of the changes in biological and physico-chemical characteristics and plant growth potential of strip mine soil following treatment with the soil inoculant 628+. A White Paper On "A Final Report to Yale Marketing Group, Ltd. 14 p.

INDEX UNDER: Mine Land Reclamation and Utilization - revegetation/ Other - overburden properties/ Williamson, Saline Counties

ABSTRACT: This final report summarizes data on biological and physico-chemical characteristics and plant growth potential of strip mine soil following treatment with a soil inoculant. Application of 628+ to spoilage collected from the Delta Mine in southern Illinois resulted in physico-chemical changes which favorably affected the spoilage as a growth medium. Favorable changes in nitrogen fixation, soil respiration, plant nitrogen and chlorophyll content persisted through a 90-day testing period. Also, findings indicated that treatment with 628+ had a positive effect upon fruition frequence in bean plants. (from conclusions)

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1977-1978 PERCENT COMPLETED: 100%

ACCURACY OF DATA: On site collection; laboratory experimentation

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: Information on soil collected at Delta Mine, Williamson and Saline Counties, Illinois.

FORMAT OF DATA: Final Report

264

Young, L. E. 1916. Surface subsidence in Illinois resulting from coal mining. Ill. State Geol. Surv., Cooperative Coal Mining Series, Bulletin 17. 112 p.

INDEX UNDER: Subsidence and Slumping

ABSTRACT: This is a preliminary study of surface subsidence resulting from coal mining operations in Illinois. Mines were visited in 24 counties. The study describes geologic conditions affecting subsidence damage caused by removal of coal, subsidence data by districts, protection of the surface, and completed or suggested investigations of subsidence.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1914 PERCENT COMPLETED: 100%

ACCURACY OF DATA: Data from on site inspections and earlier field notes.

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: Subsidence data by district in Illinois.

FORMAT OF DATA: Published Article

265

Grandt, A. F. 1948. The potentialities of revegetating and utilizing agronomic species on strip mined areas in Illinois. Ill. Agricultural Experiment Station and Ill. Coal Strippers Association. 1st Year Progress Report. 32 p.

INDEX UNDER: Mine Land Reclamation & Utilization - agriculture, pasture/ Jackson, Knox, Randolph, Saline, St. Clair, Will Counties

ABSTRACT: The foreword to this progress report outlines in detail the scope of a research project which began 1 January 1947 when the Illinois Coal Strippers Association entered into an agreement with the Illinois Agricultural Experiment Station at the University of Illinois covering a cooperative research project designed to explore utilization of surface-mined lands and to develop the highest potential uses of mined land, the type of grasses best adapted to the soils and conditions encountered, and all other facts essential to pasture and other forms of use for spoil banks. The research project was entitled 'Agronomic Land Use Research on Areas Strip Mined for Coal in Illinois'.

The report provides a brief description of the acreage of Illinois land that had been or would be subjected to surface mining, the location of the industry in the state, and a characterization of mined areas. Location of 21 established experimental plots are provided by county and coal mining company . Soil analysis data are presented for each experimental plot site including pH, phosphorus, and potassium. A detailed discussion of the revegetation research is provided and includes general background information on objectives of the study, plot design and field methods, and the results of the first year's work. Results for the first year are reported for grass-legume mixtures planted at sites in Knox, Will, St. Clair, Saline, Randolph, and Jackson Counties. Plans for research to be conducted or initiated during the 1948 growing season were outlined. (from foreword and text)

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1947 PERCENT COMPLETED: On going

ACCURACY OF DATA: Published records of Illinois Coal Strippers Association; on site experimentation; laboratory analyses

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: General for Illinois; site specific for 21 locations provided by mining company and county.

FORMAT OF DATA: Published Report - Microfiche

266

Grandt, A. F. 1949. The potentialities of revegetating and utilizing agronomic species on strip mined areas in Illinois. Ill. Agricultural Experiment Station and Ill. Coal Strippers Association. 2nd Year Progress Report. 56 p.

INDEX UNDER: Mine Land Reclamation & Utilization - agriculture, pasture

ABSTRACT: This second year progress report of a research project begun in 1947 to study the potential of using agronomic species to reclaim surface-mined land in Illinois provides additional information on spoil bank soil materials, and comparisons of such materials with surface soils found on adjoining undisturbed lands; the adaptation of various forage species to spoil bank soils; and the results of preliminary studies of comparative gains made by animals pastured on spoil banks with those pastured on undisturbed bluegrass and highly improved grass-legume pasture. Information is provided for sites located in 14 counties in Illinois. (from foreword)

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1948 PERCENT COMPLETED: On going

ACCURACY OF DATA: On site research and collection; laboratory analyses; published data.

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: General for Illinois; site specific information for locations in 14 counties of Illinois.

FORMAT OF DATA: Published Article - Microfiche

267

Grandt, A. F. 1950. The potentialities of revegetating and utilizing agronomic species on strip mined areas in Illinois. Ill. Agricultural Experiment Station and Ill. Coal Strippers Association. 3rd Year Progress Report. 39 p.

INDEX UNDER: Mine Land Reclamation & Utilization - agriculture, pasture

ABSTRACT: This third progress report of a research project begun in 1947 on the potential of utilizing agronomic species to reclaim surface-mined lands in Illinois provides additional information on soil materials on the mined areas, a classification of spoil banks based on results of soil chemical and physical analyses, adaptation of grass and legume species to spoil banks, fertility experiments, and the determination of forage yields and quality. Over 1,900 experimental plots had been established at 40 different locations on 22 mine properties in 14 counties in Illinois at the time this report was issued. Location of plots is provided on a map and results of soil analyses are given by location and county for soil acidity, phosphorus, and potassium. The amount of land surface-mined in Illinois is provided by acidity and texture classes. A list provides the forage species utilized in the experimental plots. Future plans for additional research on this project are outlined.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1949 PERCENT COMPLETED: On going

ACCURACY OF DATA: On site experimentation and inspection; laboratory analyses; published data

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: General for Illinois; site specific for 40 locations in 14 counties in Illinois.

FORMAT OF DATA: Published Report - Microfiche

268

Grandt, A. F. 1952. The potentialities of revegetating and utilizing agronomic species on strip mined areas in Illinois. Ill. Agricultural Experiment Station and Ill. Coal Strippers Association. 5th Year Progress Report. 57 p.

INDEX UNDER: Mine Land Reclamation & Utilization - agriculture, pasture

ABSTRACT: This fifth year progress report on a research project begun in 1947 on the potential of utilizing agronomic species to reclaim surface-mined land in Illinois covers experimental research being conducted at 25 different locations in 14 counties. The report provides information and discussion of soil investigations including physical and chemical analyses, organic matter content, amendments, sulfur content, grading and, microbiological studies; forage species studies which include adaptation to surface-mined lands, utilization of grass-legume mixtures, and the use of grain and seed crops; determination of forage yields and quality as exhibited by chemical composition and animal gains; and economic interpretation of methods, costs, and feasibility of species adaptation, accessibility and management, and utilization of the reclaimed lands.

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1951 PERCENT COMPLETED: 100% (5-year project)

ACCURACY OF DATA: On site experimentation; laboratory analyses; published data.

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: General for Illinois; site specific for 25 locations in 14 counties of Illinois.

FORMAT OF DATA: Published Report - Microfiche

269

Limstrom, G. A. 1948. Extent, character, and forestation possibilities of land stripped for coal in the central states. U. S. D. A., Forest Service, Central States Forest Experiment Station Technical Paper No. 109. 79 p.

INDEX UNDER: Mine Land Reclamation & Utilization - forestation/ Arkansas, Indiana, Iowa, Kansas, Kentucky, Missouri, Ohio, Oklahoma

ABSTRACT: This report examines the extent, character, and reforestation potential of surface-mined lands in the central United States including the states of Arkansas, Illinois, Indiana, Iowa, Kansas, Kentucky, Missouri, Ohio, and Oklahoma. Included in the report is a brief discussion of the affected acreage, methods utilized for surface mining, and utilization of lands subjected to surface mining. Site conditions of surface-mined lands as they affect forestation practices were discussed; acidity, texture, topography, stability and vegetational cover were examined. Recommendations for forest plantings included: choice of species, season for planting, spacing, mixed plantings, care of stock and planting methods, care of plantations, direct seeding, and exotic species. A tentative planting guide and a discussion of additional research needs were provided. An appendix provides detailed statistics by states and counties for the following data: area of surface-mined land by acidity and texture classes; area of surface-mined land by county, soil texture, and acidity class; area of surface-mined land by county and character of vegetation; and area of surface-mined land by county and coal seam.

SUPPLEMENATRY INFORMATION

TIME PERIOD: 1940's-1948 PERCENT COMPLETED: 100%

ACCURACY OF DATA: On site investigations

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: General and specific data by state, county, coal seam, and characteristics for Arkansas, Illinois, Indiana, Iowa, Kansas, Kentucky, Missouri, Ohio, and Oklahoma.

FORMAT OF DATA: Published Technical Paper

270

Limstrom, G. A. 1952. Effects of grading strip-mined lands on the early survival and growth of planted trees. U. S. D. A., Forest Service, Central States Forest Experiment Station Technical Paper No. 130. 35 p.

INDEX UNDER: Mine Land Reclamation & Utilization - forestation/ Kansas, Ohio/ Saline County

ABSTRACT: This report provides the results of experiments conducted to obtain quantitative data on the effects of grading surface-mined lands on the survival and growth of forest plantations. Four experimental plantings were established on widely varying sites in Ohio, Illinois, and Kansas, to test the effects of grading on the development of a large number of species. On three of these four experimental areas a comprehensive study on moisture conditions was conducted for one growing season to compare moisture conditions on graded and ungraded surface-mined lands. Graded spoilbanks dried more rapidly during periods of drought than the ungraded; graded banks could not absorb rain occurring during the drought periods. Conversely, when there was too much rain, graded spoilbanks became more saturated and water-logged than ungraded because of lower percolation rates brought about by the compaction of surface materials. Results revealed that effects of grading varied with texture of spoilbank materials and climatic conditions. On coarse-textured spoils in areas without frequent prolonged periods of drought and excessive rainfall, differences in survival and growth on graded and ungraded spoilbanks were negligible. On banks composed mainly of sticky, plastic clay, and in areas with extreme variations in rainfall, survival and growth were better on ungraded spoilbanks. Effects also varied by species of tree planted. (from summary)

SUPPLEMENTARY INFORMATION

TIME PERIOD: 1946-1952 PERCENT COMPLETED: 100%

ACCURACY OF DATA: On site inspection; published data

QUANTITIES OF DATA: Data summary

EST. COST & TIME FOR DATA REPRODUCTION: Photocopy

AREA COVERAGE OF DATA & RESOLUTION OF INFORMATION: Specific for sites in Ohio, Kansas, and Illinois; Saline County, Illinois.

FORMAT OF DATA: Published Technical Paper

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